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File 348:EUROPEAN PATENTS 1978-2004/Jun W01
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File 349:PCT FULLTEXT 1979-2002/UB=20040603,UT=20040527
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? ds

Set   Items   Description
s2   216769   NETWORK?
S3   84812   DATABASE?
S6   16178   CLIENT?(2N)SERVER?
S7   46173   RH OR RHM OR (REQ? ? OR REQUEST?)(2N)HANDL?
S8   16314   TIMEOUT? OR TIME? ?(W)OUT? ?
S9   0   S19
S10   3767   (LOAD? OR DOWNLOAD? OR DOWN(W)LOAD? OR UPLOAD? OR UP(W)LOA-
                  D?)(3N)(DATABASE? OR DB? ?)
S11   7649   (ASSIGN? OR REASSIGN? OR RE(W)ASSIGN? OR MAP? OR REMAP?)(2-
                  N)(S2 OR S3)
S12   22110   (S2 OR S3)(3N)MANAG?
S13   14441   DISTRIBUT?(2N)NETWORK?
S14   12843   (SERVER?)(2N)(MULTIPL? OR PROCESS?)
S15   5127   S12 AND S6
S16   524   S15 AND S10
S17   153   S16 AND S11
S18   80   S17 AND S7
S19   632   REQUEST?(2N)(SORT? OR BATCH?)
S20   32   S18 AND S19
S21   0   S20 AND S4
S22   0   S18 AND DELETE S21
S23   26   S20 AND S8
S24   2   S20 AND PROXIMIT?
S25   30   S20 AND (S13 OR S14)
S26   32   S20 OR S23 OR S24 OR S25
S27   32   S26 AND REQUEST?
S28   372594   INSTANCE? ? OR REPLICATE? ? OR REPLICATION? ?
S29   6462   LOAD?(2N)(BALANC?)
S30   53104   SCHEDUL?
S31   23   S27 AND S29
S32   23   S31 AND S30
S33   23   S32 AND S28
? t s33/3,k/1,3-23

 33/3,K/1   (Item 1 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT
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00963611   **Image available**
EXTENDED WEB ENABLED MULTI-FEATURED BUSINESS TO BUSINESS COMPUTER SYSTEM
    FOR RENTAL VEHICLE SERVICES
SYSTEME INFORMATIQUE INTERENTREPRISES A ELEMENTS MULTIPLES A ACCES INTERNET
    POUR SERVICES DE LOCATION DE VEHICULES
Patent Applicant/Assignee:
  THE CRAWFORD GROUP INC, 600 Corporate Park Drive, St. Louis, MO 63105, US
    , US (Residence), US (Nationality), (For all designated states except:
    US)

Patent Applicant/Inventor:
  WEINSTOCK Timothy Robert, 1845 Highcrest Drive, St. Charles, MO 63303, US
      , US (Residence), US (Nationality), (Designated only for: US)
  DE VALLANCE Kimberly Ann, 2037 Silent Spring Drive, Maryland Heights, MO
      63043, US, US (Residence), US (Nationality), (Designated only for: US)
  HASELHORST Randall Allan, 1016 Scenic Oats Court, Imperial, MO 63052, US,
      US (Residence), US (Nationality), (Designated only for: US)
  KENNEDY Craig Stephen, 9129 Meadowglen Lane, St. Louis, MO 63126, US, US
      (Residence), US (Nationality), (Designated only for: US)
  SMITH David Gary, 10 Venice Place Court, Wildwood, MO 63040, US, US
      (Residence), US (Nationality), (Designated only for: US)
  TINGLE William T, 17368 Hilltop Ridge Drive, Eureka, MO 63025, US, US
      (Residence), US (Nationality), (Designated only for: US)
  KLOPFENSTEIN Anita K, 433 Schwarz Road, O'Fallon, IL 62269, US, US
      (Residence), US (Nationality), (Designated only for: US)
Legal Representative:
  HAFERKAMP Richard E (et al) (agent), Howell & Haferkamp, L.C., Suite
      1400, 7733 Forsyth Blvd., St. Louis, MO 63105-1817, US,
Patent and Priority Information (Country, Number, Date):
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  Application: WO 2001US51431 20011019 (PCT/WO US0151431)
  Priority Application: US 2000694050 20001020
Parent Application/Grant:
  Related by Continuation to: US 2000694050 20001020 (CIP)
Designated States: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU
  CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP
  KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PH PL PT RO RU
  SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW
  (EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR
  (OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG
  (AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZW
  (EA) AM AZ BY KG KZ MD RU TJ TM
Publication Language: English
Filing Language: English
Fulltext Word Count: 237932

Fulltext Availability:
  Detailed Description

Detailed Description
... ever increasing number of time sensitive,
   relatively low dollar volume, vehicle rentals which in many
   instances require authorizations to be made in advance,
   reservations of vehicles from available geographic and vehicle...a great
   step forward
   over the people intensive business activity previously
    required in order to **handle** the large number of transactions
   encountered in this business relationship. Historically, the
   replacement car market...

...desired replacement vehicle to be provided, monitor the
   progress of the repair work so that **scheduling** of the rental
   vehicle could be controlled, extending the vehicle rental in
   the event of...connection. In
   this context, a stateful connection refers to a 'persistent"
   conversation, meaning that the **client** side and **server** side
   software components establish a connection to one anther once
   and multiple data transfers may...own memory or to be familiar with

complicated and
specialized codes to enter data or **request** transaction
activity. With the recent and continuing explosion of th&
Internet, more people are becoming...which at the same time creates the
potential for
abuse. There have been well publicized **instances** of."rogue"
employees making financial decisions or placing instructions
which have far reaching financial consequences...for the web portal to
interface between the
user and the providers on the web **server** and eliminating the
need for any custom software on the user's terminal. The
details...present invention need merely
send the necessary information electronically to a total loss
product and **request** an electronic response. Once the
necessary information is generated, the present invention WO 02/097700...
wishes to
purchase.

The user then selects one or more potential vehicles and
sends the **request** to the appropriate car rental location. The
car rental location can then contact the owner...to the processing of
vehicle rental transactions and other
related data such as car repair **scheduling,** etc. This
functionality provides an extension of the usability to the
invention to mobile users...is commonly found.

in different countries. For example, in some countries one
adjuster authorizes and **manages** the rental reservation for the
car while another adjuster authorizes and manages the
insurance coverage...a 24/7 or full time connection to the
Internet 24 is preferable, except for **scheduled** downtimes for
maintenance, etc. The service provider 30 which for purposes
of explaining the first...business application.

It should also be noted that the communication link 46
extending between the **server** 42 and each of the branch offices
44 may have alternative configurations. For example, in...which creates
the web
portal for access to the mainframe 32 and its resident
program. **Server** 28 may use a bi-directional GUI to character
based interface translator program, well known...the first set of
 communications allow for the reservation of the services.
These can include **requests** for authorization or a rescind
authorization **request** to be sent from the service provider to
the service purchaser. Correspondingly, authorizations and
authorization...

...services purchaser
to the services provider. Confirmations are communicated upon
confirmation of an authorized reservation **request.**

Authorization changes may be made and communicated from the
services purchaser to the service provider...may be made, such as for
changing the
type of vehicle provided, extensions may be **requested** and
entered ...contribute to an increased risk of
services being rendered in an unsatisfactory manner in many
instances to the end user. The first parent's invention has

taken the preexisting solution of...prevent hackers and
the like from unauthorized access to the system. A first, set
of **servers** 60 are interconnected in a network 62 and may
preferably include an ancillary server 64 for running **load
balancing** software or the like to **balance** the **load** and
provide
redundancy amongst what may be a plurality of web servers 60.

These web servers 60 may preferably be Sun Microsystem **servers**
running Apache web **server** software, or other such suitable
software as would be well known to those of ordinary skill in
the art. This first web server network of **servers** 60, 62
process the random and disorderly communications flowing to
and from this system and the Internet before...is depicted in Fig. 3 as
being made
through the Internet 54, the network of **servers** 70 configured
in accordance with the ARMS/WEB application software may
utilize virtually any electronic...3 which
parallels portions of that shown in Fig. 1 in that a pair of
network mainframe computers, such as AS/400's 78, 80 may
process reservations to and from...occasions when a damaged or
inconvenienced vehicle is not made
available for use when originally **scheduled**. In the prior
art, many times an extension would then need to be **requested**
through the system, with authorization **requested** and provided.

In order to streamline this process, and to minimize delay and
involvement of...
...For example, an initial authorization may be for 12
days of a vehicle rental. A **request** for ...may be authorized
automatically as being within 25% of
the original rental term and a **request** for the additional 2
days requiring approval may be automatically generated. still
another variation would...

...or body shop hours or down time for the repairs to
take place. Then, upon **request** for an extension, ...advises the
user of any
"synch" data that is older than the current data, and **requests**
the user to specify which data should be processed. After the
processor is instructed by...for an individual item should it need to be
changed and not
entered as suggested, **requested** or listed on a user's action
list.

33/3,K/3   (Item 3 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT
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00806384
NETWORK AND LIFE CYCLE ASSET MANAGEMENT IN AN E-COMMERCE ENVIRONMENT AND
    METHOD THEREOF
GESTION D'ACTIFS DURANT LE CYCLE DE VIE ET EN RESEAU DANS UN ENVIRONNEMENT

DE COMMERCE ELECTRONIQUE ET PROCEDE ASSOCIE
Patent Applicant/Assignee:
  ACCENTURE LLP, 1661 Page Mill Road, Palo Alto, CA 94304, US, US
    (Residence), US (Nationality)
Inventor(s):
  MIKURAK Michael G, 108 Englewood Blvd., Hamilton, NJ 08610, US,
Legal Representative:
  HICKMAN Paul L (agent), Oppenheimer Wolff & Donnelly, LLP, 38th Floor,
    2029 Century Park East, Los Angeles, CA 90067-3024, US,
Patent and Priority Information (Country, Number, Date):
  Patent: WO 200139030 A2 20010531 (WO 0139030)
  Application: WO 2000US32324 20001122   (PCT/WO US0032324)
  Priority Application: US 99444775 19991122; US 99447621 19991122
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  DZ EE ES FI GB GE GH GM HR HU ID IL IS JP KE KG KP KR KZ LC LK LR LS LT
  LU LV MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR
  TT UA UG UZ VN YU ZW
  (EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR
  (OA) BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG
  (AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZW
  (EA) AM AZ BY KG KZ MD RU TJ TM
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Fulltext Availability:
  Detailed Description
  Claims

Detailed Description
... the destination network and thus keeps track of information sufficient
   to get to the appropriate **network**, not necessarily the appropriate
   end user. Therefore, routers do not need to be huge supercomputing...
   computers that make such choices. For the routing of information from one
   host within a **network** to another host on the same network, the
   datagrams that are sent do not actually...

...frame directly to the destination machine.
   Indirect delivery is necessary when more than one physical **network**
   is involved, in particular when a machine on one network wishes to
   communicate with a...become part of one. larger whole with concomitant
   increases in the level of analysis, testing, **scheduling,** and
   training in all disciplines of the ISP.

   1 5
   Internet Service Potential
   Real-time...

...callback leg is enabled. In this embodiment, a callback customer
   participates through a Voice Over **Network** (VON) application
   utilizing a computer with voice capability, and can initiate a video
   screen popup...

...is to ensure quality of service (QOS) and produce reports indicatit both
   integrity and exceptions. **Scheduling** of resources is tied to this
   expert system, which regulates whether calls can be **scheduled** based
   on available or projected resources at the time of the proposed c(For
   example...

...there are insufficient outgoing trunk ports during the period of time
that a callback subscriber **requests,** then the callback subscriber
is prompted to select another time or denied access to the...

...elements;
and
3. Mediation and standardization of the network messages to aid
processing by the **network management** framework of the NGN.

The **network management** components of the NGN provide
comprehensive
solutions to address these challenges. Correlation is provided by...

...embodiment of the present invention. The Fault Management component 4600
records failures and exceptions in **network** devices (e.g. network
routers or UNIX servers) and performs the following operations.

1) performs...analysis by the
Reporting Component; and
4) allows real time viewing of faults in a **network map** and
network event views.

The Fault Management component 4600 includes the following elements.
UNIX Servers 4602- Any UNIX Server with BMC Patrol **clients** loaded.

NT **Servers** 4604 - Any NT Server with BMC Patrol clients loaded.

SNMP Devices 4606 - Any SNMP manageable device.

110
HP OV **Network** Node **Manager** (Collector Component) 4608 - HP
OpenView **Network** Node **Manager** is one product which performs
several functions. In this context it is it is responsible...

...a fault management context, Seagate NerveCenter performs rootcause
correlation of faults and events across the **network**.

HP OV **Network** Node **Manager Network** ME 4612 - HP
OpenView **Network** Node **Manager** is one product which performs
several functions. In this context it is responsible for maintaining and
displaying the node level **network map** of the **network**
the MNSIS architecture monitors.

HP OV Network Node **Manage** 4614 - HP OpenView **Network** Node
Manager is one product which performs several functions. In this
context it is it is responsible...

...4616 - An Omnibus Netcool probe which is installed on the same system as
HP OV **Network** Node **Manager** and forwards events to the Omnibus
Netcool Object Server.

Micromuse Internet Service Monitors 4618- An...

...returned to the Omnibus and can be viewed as further reference.

Remedy 4636 - Remedy Action **Request** System, a trouble ticketing
system.

Oracle Gatew 4638 - The Orrmibus Netcool Oracle Gateway automatically
reads...

...logs records within Oracle as customized by the user.

Oracle 4640 - Oracle is a relational **database management**
system.

112
Generate Time Key Scrip! 4642 - Script which generates New Time Records
from alerts...

...custom script which automatically loads records into Oracle via SQL
Loader Direct Load.

Proactive Threshold **Manager**
The Proactive Threshold **Manager** is an automated **network**
manager that
forewarns service providers of a chance that a service level agreement to
maintain a...a monitoring step 4702. In step 4702, the Proactive
Threshold Manager monitors the NGN hybrid **network**. The Proactive
Threshold **Manager** generally monitors the **network** at all times
to ensure proper service is provided to subscribers of the network, by...

...subscriber service level agreements. Service level agreement information
is generally provided to the Proactive Threshold **Manager** by the
rules **database** which contains most pertinent subscriber
information.

In a sensing step 4706, the Proactive Threshold Manager...
...further isolate problems within the network. Any information that is
deemed critical to monitor and **manage** the **network** is
translated into standard object format in a translation step 4806.

In a translation step 4806, infori-nation from step 4804 that is deemed
critical to monitor and **manage** the **network** is translated into
a standard object fonnat. Generally, typical operational events are only
logged and...

...step 4806 is received by the Information Services Manager and forwarded
to the Proactive Threshold **Manager**. The Information Services
Manager provides the data **management** and data communications
between the element manager and other system components. Generally, the
Information Services Manager adheres to CORBA standards to provide
universal information access by an object **request** broker. The
object **request** broker allows the Information Services Manager to
share management information stored in distributed **databases**. The
Proactive Threshold **Manager** uses the infori-nation provided by the
Information Services Manger to determine a current level...

...Information Services
Manager and the Presentation Manager to assist in the management of the
hybrid **network** system. The three component's are briefly described
below to provide context for the detailed discussion of the element
manager that follows,
Element Man
The element **manager** communicates with the **network** elements to

receive alarms and alerts through trapping and polling techniques. The element manager is...

...to further isolate problems within the network.

Information that is deemed critical to monitor and **manage** the **network** is translated into a standard object fori-nat and forwarded to the Infori-nation Services...

...be, but is not necessarily, software which adheres to open standards such as the Simple **Network Management** Protocol (SNMP) and the Object Management Group's (OMG) Common Object **Request** Broker Architecture (CORBA).

Information Services Manage
The information services manager provides the data management and...
...services manager adheres to CORBA standards to provide ubiquitous infori-nation access via an object **request** broker (ORB). The ORB allows the information services **manager** to share management information stored in distributed **databases**.

The information services **manager** stores critical management infori-nation into operational (real-time) and analytical (historical) distributed databases. These...the appropriate network operator.

Media and textual databases are also provided by the information services **manager**. The **databases** includes online manuals for administrative purposes, as well as for the maintenance specialists to access...

...provide procedures, policies and computer based training to network users.

The information services manager provides **requested** information (real-time and historical) to the network users via the presentation manager.

Presentation Manager...
...or Billing.

Customer Support Structure
The organization model for customer service support in the NGN **network**
provides a single point of contact that is customer focused. This single point of contact provides technical expertise in resolving customer incidents, troubles and **requests**. Generally a three tiered support structure is greatly increases customer satisfaction in service needs. Each...

...customers network problem is solved at this stage, the process ends. However, if the customers **network** problem is not solved at this stage, the process continues to a Second Tier step...

...approaches include a
Functional Model, and a Bypass Model. In the Functional Model users are **requested** to contact different areas depending on the nature of the incident.

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Calls are routed...Data Mininiz
The present invention includes data mining capability that provides the
capability to analyze **network management** data looking for
patterns and correlations across multiple dimensions. The system also
constructs models of the behavior of the data in order to predict future
growth or problems and facilitate **managing** the **network** in a
proactive, yet cost-effective mannen A technique called data mining
allows a user...up systems discover knowledge, generally in the form of
patterns, in data.

Finally, in a **managing** step 5208, the **network** is
managed based on the future behavior of the network. Data mining
involves the development of tools...architectural differences. As such,
TCP/IP protocols are publicly available in standards documents,
particularly in **Requests** for Comments (RFCs). A requirement for
Internet connection is TCP/IP, which consists of a...has two significant
drawbacks. First, the setup time can be considerable, because the call
signal **request** may find the lines busy with other calls; in this
event, there is no way...

...voice using less than one-tenth of the bandwidth of PCM. However, the
circuit switched **network** blindly allocates 64 Kbps of bandwidth for
a call, end-to-end, even if only...its destination or networks over the
internet. I EP Routers are also computers that connect **networks** and
is a newer term preferred by vendors.

These routers must make decisions as to...

...Direct delivery is the transmission of a datagram from one machine
across a single physical **network** to another machine on the same
physical network. Such deliveries do not involve routers. Instead...
become part of one larger whole with concomitant increases in the level
of analysis, testing, **scheduling,** and training in all disciplines
of the ISP.

ATM (asynchronous transfer mode) pushes network cont...operate within a
"virtual black box," a collection of distributed, very secure WAF related
hardware **instances** that are interconnected by secured information
exchange (for example, telecommunication) processes and distributed
database means...or she examines the content of the shopping basket as
required to check the item **scheduled** to purchase and the pay amount
of the items. Accordingly, it is not necessary to...sales using, for
example, the Internet as a transport
mechanism to transmit data representing purchase **requests** between a
proprietary browser and server product pair.
For example, Netscape Communications uses its Navigator...

...log-in or create an account, which is then stored in the server. Each
subsequent **request** from the user must reference the unique
identifier, either in the uniform resource locator (URL...with a remote
service center. The mass storage unit stores transitory information, such
as flight **schedules,** ticket prices, weather information and other
information useful in the planning of a business trip...a collection of
servers connected to the Internet that provide multimedia information to
users that **request** the information. The users access the
information using client programs called "browsers" to display the...

...Wide Web Servers are coupled to the global Internet. By deploying a
World-Wide Web **Server** on the global Internet a company would create
online service that is accessible to the millions of global Internet
users.

Alternatively.) a company can deploy a HTTP **server** that is
available to
customers through dial-up phone service. A dial-up HTTP server...where
advertising/content mixtures from other contexts, such as newspapers and
television, have been simply **replicated** on the Internet. For
instance, some newspapers have been "published" at least in part on
the Internet, and include advertisements...Sends electronic fulfillment
to the user
176
Provides order confirmation and tracking number
Supports micropayment **processing**
Another embodiment of the invention processes transactions pertinent to
the purchase of items. For example, credit card transactions are
processed, as are purchase order transactions. A structured payment
plan may also be created.

The actual...and a user of the software.

First, in operation 6402, a user is allowed to **request** to utilize a
software package after which user input relating to the user is
requested and received. See operation 6404 and 6406, respectively.
Such information may include identification information such...

...environment as well as the individual personal computer. In a network
environment, such as a **client-server** network, **multiple**
users may access the same copy of a particular application. Consequently,
the vendor can charge...a network.
180
Electronic licensing typically comprises providing a set of criteria
under which a **request** for an application from the server should be
granted. One licensing system uses a fixed...

...When an application is desired, the application commences running. Code
embedded in the application initially **requests** a license from the
server to facilitate the execution of the application. The server checks
the **database** of licenses, and if the appropriate licenses are
available, grants the **request.** As **requests** are received and
licenses granted, the relevant information is logged into a file to track
usage of the various applications.

If a license is not available, the **client** contacts another
server to find the appropriate license. The client in the
conventional system has the responsibility to...

...licenses from the various servers, and the individual servers provide
resources at the client's **request.** To facilitate such licensing,
the application typically includes a library of programs designed to
contact the server, **request** a license, and track the resulting
license.
When a call is made to a server...

33/3,K/4   (Item 4 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT
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00784185   **Image available**
A   SYSTEM   AND   METHOD   FOR   STREAM-BASED   COMMUNICATION IN A COMMUNICATION
    SERVICES PATTERNS ENVIRONMENT
SYSTEME,   PROCEDE   ET   ARTICLE   DE   PRODUCTION   FOURNISSANT   UN   SYSTEME DE
    COMMUNICATION   EN   CONTINU   DANS   UN ENVIRONNEMENT DE CONFIGURATIONS DE
    SERVICES DE COMMUNICATION
Patent Applicant/Assignee:
  ACCENTURE LLP, 1661 Page Mill Road, Palo Alto, CA 94304, US, US
    (Residence), US (Nationality)
Inventor(s):
  BOWMAN-AMUAH Michel K, 6426 Peak Vista Circle, Colorado Springs, CO 80918
    , US,
Legal Representative:
  HICKMAN Paul L (agent), Hickman Coleman & Hughes, LLP, P.O. Box 52037,
    Palo Alto, CA 94303-0746, US,
Patent and Priority Information (Country, Number, Date):
  Patent: WO 200117195 A2-A3 20010308 (WO 0117195)
  Application: WO 2000US24125 20000831 (PCT/WO US0024125)
  Priority Application: US 99386717 19990831
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  DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ
  LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG
  SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW
  (EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE
  (OA) BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG
  (AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZW
  (EA) AM AZ BY KG KZ MD RU TJ TM
Publication Language: English
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Fulltext Word Count: 150532

Fulltext Availability:
  Detailed Description

Detailed Description
... related processing that occurs on I 0 clients and servers.

  An intelligent network integrates heterogeneous **clients,**
  servers, and other resources by resolving incompatible protocols
  and standards.

  An intelligent network has the capability...
...single copy of the message to the communications fabric, which then
  distributes the message to **multiple** recipients.

  The following are examples of protocols that provide Packet
  Forwarding/Internetworking.

  IP (Internet Protocol...are examples of vendors of products that perform
  Transport-level encryption.

  routers.

Cisco Systems
Bay **Networks**
Xom Corp.

firewalls.

Check Point's Firewall-1
Secure Computing's BorderWare Firewall Server
Raptor...

...Systems' Eagle Firewall
routers.

Cisco Systems
Bay Networks
3Com Corp.

io Network Address Allocation 2412
Network Address Allocation services **manage** the distribution
of addresses to network nodes.

This provides more flexibility compared to having all description of
various Quality of Service parameters.

connection establishment delay - time between the connection
request and a confirm
being received by the **requester**
connection establishment failure probability - chance that the connection
will not be
established within the maximum...

...technique is the use of prioritized circuits within Frame Relay, in
which the Frame Relay **network** vendor **assigns** different
priorities to different pen-nanent virtual circuits.

Prioritization techniques are of limited effectiveness if...

...to nodes, applications, or voice calls) can be combined in the following
ways.

time division **multiplexing** (TDM) - use of a circuit is divided into
a series
of time slots, and each...T-carrier, E-carrier (e.g., TI, T3, El, E3)
TDM and FDM (Time Division **Multiplexing** and Frequency Division
Multiplexing; used
on T-carriers, etc.)
SONET, SDH
PPP, SLIP
V.32@ V.34@ V.34...

...committed or rolled back. When a transaction is committed, all changes
made by the associated **requests** are made
187
pen-nanent. When a transaction is rolled back, all changes made by the
associated **requests** are undone.
Transaction Services provide the transaction integrity mechanism for the
application. This allows all...

...provided by the DBMS software with its re-start/recovery and integrity
capabilities.

For larger **client/server** envirom-nents distributed on-line
transaction managers might be more applicable. These transaction managers
provide sharing of **server processes** across a large community
of users and can be more efficient than the DBMSs.

Figure...

...error inforination. Transaction Monitor Services, in conjunction with
Information Access and Communication Services provide for **load
balancing** across processors or machines and location transparency
for distributed transaction processing.

Implementation considerations
Does the...

...data source messaging capabilities alone.
Does the system require high throughput?
Because TP monitors provide **load balancing** functionality and
because they effectively reduce the number of connections that must be
made to...

...are available on multiple platforms and maintain interoperability
(communication, data translation, etc.) between heterogeneous resource
managers (databases) and clients (UNIX, MS Windows NT, etc.).
For this reason, projects that intend to support...not need this feature
can also benefit by using TP monitors. For example, the
191
load-balancing feature in itself can help increase system
performance. Also, the administrative facilities can help simplify system
management.

Is Data Dependent Routing Necessary?
Data Dependent Routing is the ability to route **requests** to a
particular **server** based upon the data passed within the
request. TP monitors can provide this functionality.

e.g. A system has several servers accepting **requests** from clients
dispersed across North America. There are two groups of servers. One
group of servers **handles requests** from all clients io located
in the USA while the other group serves **requests** from Canada. When
a **client** sends a **request** to the system, a field in the
request message, defining the location of the **client,** is
passed to the system. The TP monitor is then able to route the
request to the correct group of servers (USA or Canada) based upon
information in the **request** message.

Is Reliable Queueing Necessary?
TP monitors provide the ability to enqueue and dequeue **requests** to
and from a reliable (stable storage) queue. Both the application and the
administrator can control the order of the messages (service
requests) in the queue. Messages can be ordered LIFO, FEFO, time
based, priority, or by some...

...can be forwarded to the home office via a WAN, and the updates can be

replicated in the home office database. The queuing system can be
used to assure that every...transaction monitors.

BEA TUXEDO - provides a robust middleware engine for developing and
deploying business-critical **client/server** applications. BEA
TUXEDO handles not only distributed transaction processing, but also
application and the full...

...functionality of the toolkit to
provide a comprehensive environment for developing and deploying
distributed transaction **processing**.

Microsofts Transaction **Server** (Viper) - a component-based
transaction
processing system for developing, deploying, and managing high
performance, and...

...although many are on the way). Encina adds primarily a transactional
element and some
196
load balancing services to RPC's. It also provides an easier
interface to work with (although it...

...very scalable and services can be on any machine in the network.
Finally, Encina's **load balancing** is quite good, much better
then native DCE or Tuxedo.

Tuxedo
Functionality
Can handle a...

...message delivery using a stable storage queue (/Q)
Future service delivery using /Q (usually for **batch** processing)
Can prioritize messages- most important get processed sooner.

Supports many platforms (all UNIX, NT...

...for basic c/s messaging
197
Supports conversational messaging between a client and a specific
server
Peer-to-peer, **client-to-client** messaging is supported
Unsolicited messaging is supported for client processes
Asynchronous service calls can be made by **client** and **server**
processes
Synchronous service calls can be made by **client** and **server**
processes
Synchronous calls that receive no return message are supported
Very good security- must connect to...
...write to the LTLOG with a Tuxedo API (error logging provided) Automatic
process monitor for **process** that die or machines that get
partitioned
Service location independency (distribution/directory services)
Platform independency...Services coordinate transactions across one or
more resource managers either on a single machine or **multiple**
machines within the **network**. Transaction **Management** Services
ensure that all resources for a transaction are updated, or in the case
of...

...rolled back.

This services that allow multiple applications to share data with
integrity. The transaction **management** services help implement the
notion of a transaction -- a set of computations producing changes to...

...of a completed transaction are persistent.

Two-Phase Commit is a feature found in distributed **database**
management systems and online transaction processing (OLTP)
monitors to ensure information integrity across distributed databases.
With...database engine/server, it needs to know, during startup, various
information like - database name, the **server** name, login ID, etc.
Instead of hard coding all these information in the application
executable...

...free disk space, monitor resolution, correct version). These services
are invoked when an application begins **processing** or when a
component is called. Applications can use these services to verify that
the...

...required Execution Architecture components and other application
components are Hable.

aval
implementation considerations
205
In **client/server** applications, it may be necessary to
implement Environment Venification Services to ensure that the
client and **server** applications are of a compatible release
level.

ActiveX framework provides services for automatic installation and...
...to control io individual computer tasks or processes, and manage memory.
They provide services for **scheduling,** starting, stopping, and
restarting both **client** and **server** tasks (e.g., software
agents).

Implementation considerations
Memory management, the allocating and freeing of system...

...employees, customers) and additional types of transactions (e.g.,
e-commerce, help-desks). In traditional **client/server**
environments most users are employees of the company. In Netcentnic
environments there are typically also...

...the development effort by reusing common services, etc. These
architecture functions perform services such as **database** calls,
state **management,** etc.

Application errors are also those which occur during the normal execution
of the application...computer (in this paper the term Context Management
refers to storing state information on the **server,** not the
client). Client/server architectures simplified or
eliminated the need for Context Management (storing state information on
the server), and created a need to store state infori-nation on the
client. Typically, in traditional **client/server** systems this

type of state management (i.e., data sharing) is done on the client...

...the client nor save any information between client exchanges (i.e., web
page submits or **requests**). Each HTTP exchange is a completely
independent event. Therefore, information entered into one HTML fann...

...Netcentric technologies now offer additional options for implementing
state i 0 management on both the **client** and **server** machines.

Possible Product Options
NetDynamics Inc. NetDynamics
NetDynarnics Inc. NetDynamics
1 5 NetDynamics provides built...

...currently viewing can be maintained in the PE. NetDynamics maintains
state information on both the **server** and on the client page.
Application state information is maintained by the application server,
and...

...211
Code/decode information can be stored at any layer of an n-tier
architecture – **client**, application **server**, or database. The
decision will need to be based upon codes table size and number...

...the client operate in different date/time zone?
In most large scale distributed applications, the **client** and the
server applications (or machines) are scattered over different time
zones. This forces the client applications and...standards. These
standards define how components should be built and how they should
communicate.

Object **Request** Broker (ORB) services, based on COM/DCOM and CORBA,
focus on how components communicate. Component...

...one of the more popular uses of OpenDoc tools is for creating and
implementing OLE **clients** and **servers**. Because OpenDoc
provides a more manageable set of APIs than OLE, it may be that...

...Environment (ONE) is an object-oniented software framework from Netscape
Communications for use with Internet **clients** and **servers**,
which enables the integrating of Web **clients** and **servers** with
other enterprise resources and data. By
215
supporting CORBA, ONE-enabled systems will be...data within the domain of
that component. For example, a Customer Domain component might be
requested to determine if it's credit limit had been exceeded when
provided with a new...

...services support the following.

Managing documents in most formats such as HTML, Microsoft Word, etc.

Handling of client **requests** for HTML pages. A Web browser
initiates an HTTP **request** to the Web server either specifying the
HTML document to send back to the browser...

...of the Web server environment. For example, server side scripts can be
used to process **requests** for additional information, such as data

from an RDBMS.

Caching Web pages. The first time a user **requests** a Web page, the
Web server retrieves that page from the network and stores it...

...a cache (memory on the Web server). When another page or the same page
is **requested,** the Web server first checks to see if the page is
available in the cache...Server Services.

Netseape Enterprise Web Server
Am enterprise-strength Web server that enables organizations to
manage and publish their information and deploy Netcentric
applications. Netscape Enterprise Web Server is built on...

...A multi-threaded HTTP server that provides integrated features for
translating and dispatching client HTTP **requests** directly to the
Oracle7 Server using PL/SQL.

Push Pull Services (2840)
Push/Pull Services...

...the type of content they want to receive.

Content providers then seek to package the **requested** information
for automatic distribution to the user's PC.

Depending upon requirements, synchronous or asynchronous...
...where no user involvement is required as well as reporting. Areas for
design attention include **scheduling,** recovery/restart,
221
use of job streams and high availability (e.g. 24 hour running...

...billing, etc. and can also include report generation. This is an often
overlooked area in **client/server** architectures.

to Traditional **client/server** solutions and Netcentric
solutions often require batch processing, but unlike the mainframe, the
typical platforms...

...framework for the reporting system.

Report Definition Services. These services receive and identify the
report **request,** perform required validation routines, and format
the outputted report(s). After the **request** is validated, the report
build function is initiated.

Report Build Services. These services are responsible...

...223
The report architecture within Environment Services supports the
generation and delivery of reports. Applications **request** report
services by sending a message to the reporting framework.

The following types of reports are supported by the reporting
application framework.

Scheduled: Scheduled reports are generated based upon a time
and/or date requirement.

These reports typically contain...

...and are generated periodically (invoices and bills, for example).

33/3,K/5   (Item 5 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT
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00784184   **Image available**
A SYSTEM, METHOD FOR FIXED FORMAT STREAM COMMUNICATION IN A COMMUNICATION
    SERVICES PATTERNS ENVIRONMENT
SYSTEME, PROCEDE ET ARTICLE POUR FLUX DE FORMAT FIXE DANS UN ENVIRONNEMENT
    A CONFIGURATIONS DE SERVICES DE COMMUNICATION
Patent Applicant/Assignee:
  ACCENTURE LLP, 1661 Page Mill Road, Palo Alto, CA 94304, US, US
    (Residence), US (Nationality)
Inventor(s):
  BOWMAN-AMUAH Michel K, 6426 Peak Vista Circle, Colorado Springs, CO 80918
    , US,
Legal Representative:
  HICKMAN Paul L (agent), Oppenheimer Wolff & Donnelly LLP, P.O. Box 52037,
    Palo Alto, CA 94303-0746, US,
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  TJ TM TR TT UA UG UZ VN YU ZA ZW
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  Claims

Claim
... good way to scope the solution space. This results in a good context
  for making **process** and application decisions. Finally, Business
  Components provide a common vocabulary for the project team. They...
  consumer-to-business transactions. To do this, the Web must evolve into a
  full-blown **client/server** medium that can run your
  line-of-business applications (i.e., a delivery vehicle for...

...using object technology. For the same reason (i.e., standard
  interfaces), it is possible to **request** a component's services from
  any platform. That's not true of objects, unless they...could be used to

manage a variety of things: conference rooms, fixed assets, work in
process, finished goods, and leased frequencies.
274
So one can start out building an inventory management...

...technology must be justified in business rather than technology terms.
In many cases, a traditional **client/server** solution can
deliver the benefits. This proves especially true for short-lived,
simple, or moderately...knowledge workers needing flexible navigation.
Reduces system test complexity and cost
In a few different **instances,** the object-oriented development
approach has significantly reduced system test complexity. In all these
cases the projects fell behind **schedule** due to learning curve, the
complexity of custom architecture development, and increased effort for
component...

...functionality and performance was much easier. For example, since less
code and data knowledge was **replicated** throughout the system,
global changes could often be made by making a change in one...core
business components that represent the business directly in software.
These components perform behaviors upon **request** by windows,
reports, or batch process control objects. The presence of a component
model distinguishes component-based systems from procedural, **client
/server** systems. In a procedural approach, there is no shared
business component model. This typically requires...

...database vendor.
Architecture development must start early
A tension exists between scenarios andframeworks
As with **client/server,** architecture work must start early. As
noted above, this is particularly challenging because of the...addition,
the extensive reuse of a core business component model requires an
organization structure that **manages** it as a shared resource. This
creates a tension between the needs to support consistent...

...more. It is also extremely important to have a significant percentage of
the team with **client/server** skills, to reduce additional
learning curves such as GUI design or **client/server**
architecture development.
Estimating and planning present new management challenges
Projects should allow timefor start-up...

...mix of waterfall and iteration
Systems development traditionally relies on a waterfall model. This
approach **manages** development in sequential phases of activity such
as analysis, design, code, and test. The waterfall bridges, performing
conversion, and rolling out training are high. These costs must
balance those introduced by the delayed delivery of business
benefits and the risks implied by increasing scope and team size. The
urgency of the business and the desire to **manage** development size
may sometimes favor an incremental approach.
Commercially available methodologies have a narrow focus...

...component-based system and the variety of technologies associated with
it complicate testing and configuration **management.** A
componentbased system may often have more than ten times as many
components as a...

...generally demand even more and deeper skills, unless the team has
  exceptionally talented individuals, extensive **client/server**
  experience, and ample time to scale the learning curve. It is important
  to note that...common to those who have successfiffly scaled the
  component management learning curve include:
  Experience with **client/server** development and a technical
  orientation
  293
  Willingness and flexibility to learn new terminology, tools, and...

...roles. While the dual role of building and supporting an architecture
  exists in a traditional **client/server** system, it may be more
  pronounced with component technology. Component-based systems require a
  higher...the training needs during normal work hours for-the system to
  meet a   reasonable
  299
  schedule. Thus, at times, individuals must pursue personal study
  and experimentation after hours. This type of...

  33/3,K/6   (Item 6 from file: 349)
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00784143
SYSTEM, METHOD AND ARTICLE OF MANUFACTURE FOR LOAD BALANCING REQUESTS AMONG
    SERVERS
SYSTEME,   PROCEDE   ET   ARTICLE   POUR   EQUILIBREUR DE   CHARGE   DANS   UN
    ENVIRONNEMENT DE STRUCTURES DE SERVICES
Patent Applicant/Assignee:
  ACCENTURE LLP, 1661 Page Mill Road, Palo Alto, CA 94304, US, US
    (Residence), US (Nationality)
Inventor(s):
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Legal Representative:
  HICKMAN Paul L (agent), Hickman Coleman & Hughes, LLP, P.O. Box 52037,
    Palo Alto, CA 94303-0746, US,
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Fulltext Availability:
  Detailed Description

Claims

Detailed Description
... error information. Transaction Monitor Services, in conjunction with
Information Access and Communication Services provide for **load
balancing** across processors or machines and location transparency
for distributed transaction processing.

Implementation considerations
Does the...
...source messaging capabilities alone.

Does the system require high throughput?
188
Because TP monitors provide **load balancing** functionality and
because they effectively reduce the number of connections that must be
made to...   -

...are available on multiple platforms and maintain interoperability
(communication, data translation, etc.) between heterogeneous resource
managers (databases) and clients (UNIX, MS Windows NT, etc.).
For this reason, projects that intend to support...dependable.

Is the system distributed across multiple nodes?
TP monitors provide common administrative facilities to **manage**
groups of servers. These facilities allow a system to be managed from one
location with...

...this quality is a candidate for a TP monitor.

Is the system not a transaction **processing** system?
Although TP monitors provide global two-phase commit "transaction
processing" functionality, systems that do not need this feature can also
benefit by using TP monitors. For example, the **load-balancing**
feature in itself can help increase system performance. Also, the
administrative facilities can help simplify system management.

Is Data Dependent Routing Necessary?
Data Dependent Routing is the ability to route **requests** to a
particular **server** based upon the data passed within the
request. TP monitors can provide this functionality.

191
e.g. A system has several servers accepting **requests** from clients
dispersed across North America. There are two groups of **servers**.
One group of servers **handles requests** from all clients
located in the USA while the other group serves **requests** from
Canada. When a client sends a **request** to the system, a field in the
request message, defining the location of the client, is passed to
the system. The TP monitor is then able to route the **request** to the
correct group of servers (USA or Canada) based upon information in the
request message.

Is Reliable Queueing Necessary?
TP monitors provide the ability to enqueue and dequeue **requests** to
and from a reliable (stable storage) queue. Both the application and the
administrator can control the order of the messages (service
requests) in the queue. Messages can be ordered LIFO, FIFO, time

based, priority, or by some...

...can be forwarded to the home office via a WAN, and the updates can be
replicated in the home office database. The queuing system can be
used to assure that every...

...Does the client plan to use Windows NT?
On Which platforms/operating systems do the **servers** run?
TP monitor support for NT may be limited.

Some TP monitors are capable of...

...installed base of clients.

Does the system require integration with other 3rd party tools?
The **client** may expect the TP monitor to integrate with an already
installed base of 3rd party...transaction monitors.
BEA TUXEDO - provides a robust middleware engine for developing and
deploying business-critical **client/server** applications. BEA
TUXEDO handles not only distributed transaction processing, but also
application and the full...

...and operating systems.

IBMs CICS/6000 - an application server that provides industrial-strength,
online transaction **processing** and transaction **management** for
mission-critical
applications on both IBM and non-IBM platforms. CICS manages and
coordinates...

...and integrity of
data.

Transares Encina - implements the fundamental services for executing
distributed transactions and **managing** recoverable data, and various
Encina extended services, which expand upon the ftinctionality of the
toolkit to
195
provide a comprehensive environnient for developing and deploying
distributed transaction **processing**.

Microsofts Transaction **Server** (Viper) - a component-based
transaction
processing system for developing, deploying, and managing high
performance, and...

...applications (although many are on the way). Encina adds primarily a
transactional element and some **load balancing** services to
RPC's. It also provides an easier interface to work with (although it...

...very scalable and services can be on any machine in the network.
Finally, Encina's **load balancing** is quite good, much better
then native DCE or Tuxedo.

Tuxedo
Functionality
196
Can handle...

...Future service delivery using /Q (usually for batch processing)
  Can prioritize messages- most important get **processed** sooner.
  Supports many platforms (all UNIX, NT, all common **client**
  platfon-ns)
  Tuxedo supports C, C++, and Cobol development
  Can be used for basic c...

...supported
  Unsolicited messaging is supported for client processes
  Asynchronous service calls can be made by **client** and **server**
  processes
  Synchronous service calls can be made by **client** and **server**
  processes
  Synchronous calls that receive no return message are supported
  Very good security- must connect to...Management Services.

  Transaction Management 2606
  Transaction Management Services coordinate transactions across one or
  more resource **managers** either on a single machine or multiple
  machines within the **network**. Transaction **Management** Services
  ensure that all resources for a transaction are updated, or in the case
  of...

...a completed transaction are persistent.
  Two-Phase Conu-nit is a feature found in distributed **database**
  management systems and online transaction **processing** (OLTP)
  monitors to ensure infonnation integrity across distributed databases.
  With this feature, a transaction is...versions of required Execution
  Architecture components and other application components are available.

  Implementation considerations
  In **client/server** applications, it may be necessary to
  implement Environment Verification Services to ensure that the
  client and **server** applications are of a compatible release
  level.

  ActiveX framework provides services for automatic installation and...

...Memory Management Services allow applications and/or other events to
  control individual computer tasks or **processes,** and manage memory.
  They provide services for **scheduling,** starting, stopping, and
  restarting both **client** and **server** tasks (e.g., software
  agents).

  Implementation considerations
  Memory management, the allocating and freeing of system...
...employees, customers) and additional types of transactions (e.g.,
  e-commerce, help-desks). In traditional **client/server**
  environments most users are employees of the company. In Netcentric
  environments there are typically also...

...the development effort by reusing common services, etc. These
  architecture functions perform services such as **database** calls,
  state **management,** etc.

Claim

I A method for distributing incoming **requests** amongst server
components for optimizing usage of resources, comprising the steps of
(a) receiving incoming **requests**;
(b) storing the **requests**;
(c) determining an availability of server components;
(d) compiling a listing of available server components...

...component on the listing of available server components is
most appropriate to receive a particular **request**; and
(f) sending each particular **request** to the selected server
component determined to be most appropriate to receive the particular
request.

2 A method as recited in claim 1, wherein the step of determining which
server component is the most appropriate is performed by allocating the
requests on a round-robin basis whereby **requests** are assigned
to consecutive server components by traversing along the listing of
available server components...

...available server components is calculated based on at least two of:
current CPU utilization, kernel **scheduling** run-queue length,
current network traffic at a node to the server component, and a number
of **requests** currently being serviced.

5 A method as recited in claim 1, further comprising the step of
rerouting a **request** to a different available server component upon
a crash of the selected server component.
623...

...be reestablished.

7 A computer program embodied on a computer readable medium for
distributing incoming **requests** amongst server components for
optimizing usage of resources,
comprising:
(a) a code segment that receives incoming **requests**;
, (b) a code segment that stores the **requests**;
(c) a code segment that determines an availability of server components;
(d) a code segment...

...component on the listing of available server
components is most appropriate to receive a particular **request**; and
(f) a code segment that sends each particular **request** to the
selected server component determined to be most appropriate to receive
the particular **request**.

8 A computer program as recited in claim 7, wherein the code segment that
determines which server component is the most appropriate is performed by
allocating the **requests** on a round-robin basis whereby
requests are assigned to consecutive server components by
traversing along the listing of available server components...

...available server components is calculated based on at least two of-
current CPU utilization, kernel **scheduling** run-queue length,
current network traffic at a node to the server component, and a number
of **requests** currently being serviced.

11 A computer program as recited in claim 7, further comprising a code

segment that reroutes a **request** to a different available server
component upon a crash of the selected server component.
624...

...connection to a server component needs to be reestablished.
13 A system for distributing incoming **requests** amongst server
components for optimizing
usage of resources, comprising:
(a) logic that receives incoming **requests**;
(b) logic that stores the **requests**;
(c) logic that determines an availability of server components;
(d) logic that compiles a listing...

...component on the listing of available server
components is most appropriate to receive a particular **request**; and
(f) logic that sends each particular **request** to the selected server
component detennined to be most appropriate to receive the particular
request.

14 A system as recited in claim 13, wherein the logic that determines
which server component is the most appropriate is performed by allocating
the **requests** on a roundrobin basis whereby **requests** are
assigned to consecutive server components by traversing along the listing
of available server components...

...available server components is calculated based on at least two of@
current CPU utilization, kernel **scheduling** run-queue length,
current network traffic at a node to the server component, and a number
of **requests** currently being serviced.

17 A system as recited in claim 13, ftirther comprising logic that
reroutes a **request** to a different available server component upon a
crash of the selected server component.
625...

 33/3,K/7   (Item 7 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT
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00784140
A SYSTEM, METHOD AND ARTICLE OF MANUFACTURE FOR A GLOBALLY ADDRESSABLE
    INTERFACE IN A COMMUNICATION SERVICES PATTERNS ENVIRONMENT
SYSTEME, PROCEDE   ET   ARTICLE   DE FABRICATION S'APPLIQUANT DANS UN
    ENVIRONNEMENT DE STRUCTURE DE SERVICES DE COMMUNICATIONS VIA UNE
    INTERFACE ADRESSABLE GLOBALEMENT
Patent Applicant/Assignee:
  ACCENTURE LLP, 1661 Page Mill Road, Palo Alto, CA 94304, US, US
    (Residence), US (Nationality)
Inventor(s):
  BOWMAN-AMUAH Michel K, 6426 Peak Vista Circle, Colorado Springs, CO 80918
    , US,
Legal Representative:
  HICKMAN Paul L (agent), Oppenheimer Wolff & Donnelly, LLP, 1400 Page Mill
    Road, Palo Alto, CA 94304, US,
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Priority Application: US 99387214 19990831
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   LU LV MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR
   TT UA UG UZ VN YU ZW
   (EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE
   (OA) BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG
   (AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZW
   (EA) AM AZ BY KG KZ MD RU TJ TM
Publication Language: English
Filing Language: English
Fulltext Word Count: 150371

Fulltext Availability:
  Detailed Description

Detailed Description
... Raptor Systems' Eagle Firewall
  routers.

  Cisco Systems
  Bay Networks
  3Com Corp.

  Network Address Allocation 2412
  Network Address Allocation services **manage** the distribution
  of addresses to network nodes.

  This provides more flexibility compared to having all...

...a description of various Quality of Service parameters.

  connection establishment delay - time between the connection
  request and a confirin
  being received by the **requester**
   connection establishment failure probability - chance that the
  connection will not be
  established within the maximum...

...technique is the use of prioritized circuits within Frame Relay, in
  which the Frame Relay **network** vendor **assigns** different
  priorities to different perinarient virtual circuits.

  Prioritization techniques are of limited effectiveness if data...
  committed or rolled back. When a transaction is committed, all changes
  made by the associated **requests** are made perinanent. When a
  transaction is rolled back, all changes made by the associated
  requests are undone.

  Transaction Services provide the transaction integrity mechanism for the
  application. This allows all...

...provided by the DBMS software with its re-start/recovery and integrity
  capabilities.

  For larger **client/server** environments distributed on-line
  transaction managers might be more applicable. These transaction managers
  provide sharing of **server processes** across a large community

of users and can be more efficient than the DBMSs.

190...

...infori-nation. Transaction Monitor Services, in conjunction with
Information Access and Communication Services provide for **load
balancing** across processors or machines and location transparency
for distributed transaction processing.

Implementation considerations
Does the...   .
...data source messaging capabilities alone.

Does the system require high throughput?
Because TP monitors provide **load balancing** ftinctionality and
because they effectively reduce the number of connections that must be
made to...

...are available on multiple platforms and maintain interoperability
(communication, data translation, etc.) between heterogeneous resource
managers (databases) and clients (UNIX, MS Windows NT, etc.).
For this reason, projects that intend to support...system not a
transaction processing system?
Although TP monitors provide global two-phase commit "transaction
processing" ftinctionality, systems that do not need this feature
can also benefit by using TP monitors. For example, the **load-
balancing** feature in itself can help increase system performance.
Also, the administrative facilities can help simplify system management.

Is Data Dependent Routing Necessary?
Data Dependent Routing is the ability to route **requests** to a
particular server based upon the data passed within the **request**. TP
monitors can provide this functionality.
e.g. A system has several servers accepting **requests** from clients
dispersed across North America. There are two groups of **servers**.
One group of **servers handles requests** from all clients
located in the USA while the other group serves **requests** from
Canada. When a **client** sends a
194
request to the system, a field in the **request** message,
defining the location of the **client**, is passed to the system. The
TP monitor is then able to route the **request** to the correct group
of servers (USA or Canada) based upon inforination in the **request**
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Is Reliable Queueing Necessary?
TP monitors provide the ability to enqueue and dequeue **requests** to
and from a reliable (stable storage) queue. Both the application and the
administrator can control the order of the messages (service
requests) in the queue. Messages can be ordered LIFO, FIFO, time
based, priority, or by some...

...can be forwarded to the home office via a WAN, and the updates can be
replicated in the home office database. The queuing system can be
used to assure that every...in this practice aid, all of them offer
varying levels of mainframe connectivity.

Does the **client** have existing personnel with mainframes - CICS

experience? CICS/6000 has a programming interface similar to...

...transaction monitors.

BEA TUXEDO - provides a robust middleware engine for developing and
deploying business-critical **client/server** applications. BEA
TUXEDO handles not only distributed transaction processing, but also
application and the full...

33/3,K/8   (Item 8 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT
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00784139
A SYSTEM, METHOD AND ARTICLE OF MANUFACTURE FOR A SELF-DESCRIBING STREAM IN
    A COMMUNICATION SERVICES PATTERNS ENVIRONMENT
SYSTEME,   PROCEDE   ET   ARTICLE   DE   FABRICATION   DESTINES   A   UN   FLUX
    D'AUTODESCRIPTEURS   DANS   UN   ENVIRONNEMENT   DE   MODELES   DE   SERVICES   DE
    COMMUNICATION
Patent Applicant/Assignee:
  ACCENTURE LLP, 1661 Page Mill Road, Palo Alto, CA 94304, US, US
    (Residence), US (Nationality)
Inventor(s):
  BOWMAN-AMUAH Michel K, 6426 Peak Vista Circle, Colorado Springs, CO 80918
    , US,
Legal Representative:
  HICKMAN Paul L (agent), Oppenheimer Wolff & Donnelly, LLP, 1400 Page Mill
    Road, Palo Alto, CA 94304, US,
Patent and Priority Information (Country, Number, Date):
  Patent: WO 200116734 A2-A3 20010308 (WO 0116734)
  Application: WO 2000US23999 20000831 (PCT/WO US0023999)
  Priority Application: US 99387070 19990831
Designated States: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ
  DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ
  LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG
  SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW
  (EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE
  (OA) BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG
  (AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZW
  (EA) AM AZ BY KG KZ MD RU TJ TM
Publication Language: English
Filing Language: English
Fulltext Word Count: 150517

Fulltext Availability:
  Detailed Description

Detailed Description
... is not required.

  Multicasting - The Packet Forwarding/Internetworking service may support

multicasting, which is the **process** of transferring a single message
to multiple recipients at the same time. Multicasting allows a...which
allows traffic unless it has been explicitly prohibited.

Possible Product Options
Cisco Systems; Bay **Networks**; 3 Corn Corp.; Check Points Firewall-
1; Raptor Systems Eagle
Firewall; Data Fellows F-Secure...

...Raptor Systems' Eagle Firewall
routers.

Cisco Systems
Bay Networks
3Com Corp.

Network Address Allocation 2412
Network Address Allocation services **manage** the distribution
of addresses to network nodes.

This provides more flexibility compared to having all...of various
Quality of Service parameters.

1 5 connection establishment delay - time between the connection
request and a confirm
being received by the **requester**
connection establishment failure probability - chance that the connection
will not be
established within the maximum...

...technique is the use of prioritized circuits within Frame Relay, in
which the Frame Relay **network** vendor **assigns** different
priorities to different permanent virtual circuits.

Prioritization techniques are of limited effectiveness if data...

...on the same network/subnetwork.

Shared Access - The Media Access service provides a method for
multiple network nodes to share access to a physical **network**.
Shared Access schemes include the following.

CSMAICD - Carrier Sense Multiple Access with Collision Detection. A...
committed or rolled back. When a transaction is committed, all changes
made by the associated **requests** are made permanent. When a
transaction is rolled back, all changes made by the associated
requests are undone.

Transaction Services provide the transaction integrity mechanism for the
application. This allows all...

...provided by the DBMS software with its re-start/recovery and integrity
capabilities.

For larger **client/server** environments distributed on-line
transaction managers might be more applicable. These transaction managers
provide sharing of **server processes** across a large community
of users and can be more efficient than the DBMSs.

190...

...infon-nation. Transaction Monitor Services, in conjunction with
Information Access and Communication Services provide for **load
balancing** across processors or machines and location transparency
for distributed transaction **processing**.

Implementation considerations
Does the system access nonrelational data?
Some TP monitors provide a method of...

...data source messaging capabilities alone.
Does the system require high throughput?
Because TP monitors provide **load balancing** functionality and
because they effectively reduce the number of connections that must be
made to...

...are available on multiple platfornis and maintain interoperability
(communication, data translation, etc.) between heterogeneous resource
managers (**databases**) and clients (UNIX, MS Windows NT, etc.).
For this reason, projects that intend to support...strength of TP
monitors is their ability to ensure a global two-phase commit over
multiple, heterogeneous databases. A system that has this quality
is a candidate for a TP monitor...

...system not a transaction processing system?
Although TP monitors provide global two-phase commit "transaction
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can also benefit by using TP monitors. For example, the **load-
balancing** feature in itself can help increase system performance.
Also, the administrative facilities can help simplify system management.

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Data Dependent Routing is the ability to route **requests** to a
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Canada. When a client sends a
194
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defining the location of the client, is passed to the system. The TP
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requests) in the queue. Messages can be ordered LIFO, FIFO, time
based, priority, or by some...
...can be forwarded to the home office via a WAN, and the updates can be
replicated in the home office database. The queuing system can be

used to assure that every...transaction monitors.

BEA TUXEDO - provides a robust middleware engine for developing and
deploying business-critical **client/server** applications. BEA
TUXEDO handles not only distributed transaction processing, but also
application and the full...

...of the toolkit to
198
provide a comprehensive enviromnent for developing and deploying
distributed transaction **processing**.

Microsofts Transaction **Server** (Viper) - a component-based
transaction
processing system for developing, deploying, and managing high
performance, and...

...applications (although many are on the way). Encina adds primarily a
transactional element and some **load balancing** services to
RPC's. It also provides an easier interface to work with (although it...
...very scalable and services can be on any machine in the network.
Finally, Encina's **load balancing** is quite good, much better
then native DCE or Tuxedo.

Tuxedo
Functionality
199
Can **handle** a large number of concurrent client applications
Can handle a large volume of through-put...

 33/3,K/9   (Item 9 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT
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00784138
SYSTEM, METHOD, AND ARTICLE OF MANUFACTURE FOR A REQUEST BATCHER IN A
    TRANSACTION SERVICES PATTERNS ENVIRONMENT
SYSTEME, PROCEDE ET ARTICLE MANUFACTURE POUR MODULE DE MISE EN LOTS DES
    REQUETES   DANS   UN   ENVIRONNEMENT   CARACTERISE   PAR   DES   SERVICES
    TRANSACTIONNELS
Patent Applicant/Assignee:
  ACCENTURE LLP, 1661 Page Mill Road, Palo Alto, CA 94304, US, US
    (Residence), US (Nationality)
Inventor(s):
  BOWMAN-AMUAH Michel K, 6426 Peak Vista Circle, Colorado Springs, CO 80918
    , US,
Legal Representative:
  HICKMAN Paul L (agent), Oppenheimer Wolff & Donnelly, LLP, 1400 Page
    Mills Road, Palo Alto, CA 94304, US,
Patent and Priority Information (Country, Number, Date):
  Patent: WO 200116733 A2-A3 20010308 (WO 0116733)
  Application: WO 2000US23885 20000831 (PCT/WO US0023885)
  Priority Application: US 99387575 19990831
Designated States: AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CU CZ DE DK
    DZ EE ES FI GB GE GH GM HR HU ID IL IS JP KE KG KP KR KZ LC LK LR LS LT

LU LV MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR
TT UA UG UZ VN YU ZW
(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE
(OA) BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG
(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZW
(EA) AM AZ BY KG KZ MD RU TJ TM
Publication Language: English
Filing Language: English
Fulltext Word Count: 150393

Fulltext Availability:
  Detailed Description
  Claims

Detailed Description
... the same network/subnetwork.

  Shared Access - The Media Access service provides a method for multiple
  network nodes to share access to a physical network. Shared Access
  schemes include the following.

  CSMAICD...
...a special control message) among nodes to designate which node has the
  right to transmit.

  multiplexing - A method of sharing physical media among nodes by
  consolidating **multiple,** independent channels into a single circuit.
  The independent channels (assigned to nodes, applications, or voice...
  committed or rolled back. When a transaction is committed, all changes
  made by the associated **requests** are made
  186
  permanent. When a transaction is rolled back, all changes made by the
  associated **requests** are undone.

  Transaction Services provide the transaction integrity mechanism for the
  application. This allows all...

...provided by the DBMS software with its re-start/recovery and integrity
  capabilities.

  For larger **client/server** environments distributed on-line
  transaction managers might be more applicable. These transaction managers
  provide sharing of **server processes** across a large community
  of users and can be more efficient than the DBMSs.
  Figure...

...error information. Transaction Monitor Services, in conjunction with
  Information Access and Communication Services provide for **load**
  balancing across processors or machines and location transparency
  for distributed transaction **processing.**

  Implementation considerations
  Does the system access nonrelational data?
  187
  Some TP monitors provide a method...

...data source messaging capabilities alone.

Does the system require high throughput?
Because TP monitors provide **load balancing** functionality and
because they effectively reduce the number of connections that must be
made to...

...are available on multiple platforrns and maintain interoperability
(communication, data translation, etc.) between heterogeneous resource
managers (**databases**) and clients (UNIX, MS Windows NT, etc.).
For this reason, projects that intend to support...strength of TP
monitors is their ability to ensure a global two-phase commit over
multiple, heterogeneous databases. A system that has this quality
is a candidate for a TP monitor...

...not need this feature can also benefit by using TP monitors. For
example, the
190
load-balancing feature in itself can help increase System
performance. Also, the administrative facilities can help simplify system
management.

Is Data Dependent Routing Necessary?
Data Dependent Routing is the ability to route **requests** to a
particular server based upon the data passed within the **request**. TP
monitors can provide this functionality.

e.g. A system has several servers accepting **requests** from clients
dispersed across North America. There are two groups of servers. One
group of **servers handles requests** from all clients
located in the USA while the other group serves **requests** from
Canada. When a client sends a **request** to the system, a field in the
request message, defining the location of the client, is passed to
the system. The TP monitor is then able to route the **request** to the
correct group of servers (USA or Canada) based upon information in the
request message.

Is Reliable Queueing Necessary?
TP monitors provide the ability to enqueue and dequeue **requests** to
and from a reliable (stable storage) queue. Both the application and the
administrator can control the order of the messages (service
requests) in the queue. Messages can be ordered LIFO, FIFO, time
based, priority, or by some...

...can be forwarded to the home office via a WAN, and the updates can be
replicated in the home office database. The queuing system can be
used to assure that every...transaction monitors.

BEA TUXEDO - provides a robust middleware engine for developing and
deploying business-critical **client/server** applications. BEA
TUXEDO handles not only distributed transaction processing, but also
application and the full...

...ftinctionality of the toolkit to
provide a comprehensive environinent for developing and deploying
distributed transaction **processing.**

Microsofts Transaction **Server** (Viper) - a component-based
transaction
processing system for developing, deploying, and managing high

performance, and...

...of functions including security services, RPC's, a directory service
(like a yellow pages for **clients** to find services) and a standard
time service, and it is truly cross-platform and...

...although many are on the way). Encina adds primarily a transactional
element and some
195
load balancing services to RPC's. It also provides an easier
interface to work with (although it...

...very scalable and services can be on any machine in the network.
Finally, Encina's **load balancing** is quite good, much better
then native DCE or Tuxedo.
Tuxedo
Functionality
Can handle a large number of concurrent client applications
Can **handle** a large volume of through-put (ex. I 000+ TPS)
Scaleable (handle many clients or...

...delivery using a stable storage queue (/Q)
Future service delivery using /Q (usually for batch **processing**)
Can prioritize messages- most important get processed sooner.

Supports many platforms (all UNIX, NT, all...

...development
Can be used for basic c/s messaging
196
Supports conversational messaging between a **client** and a specific
server
Peer-to-peer, client-to-**client** messaging is supported
Unsolicited messaging is supported for client processes
Asynchronous service calls can be made by **client** and **server**
processes
Synchronous service calls can be made by **client** and **server**
processes
Synchronous calls that receive no return message are supported
Very good security- must connect to...

...be used to develop highly-available systems (240)
Has been implemented with PowerBuilder, VisualBasic, Motif **clients,**
and unix batch systems.

Claim
   I A method for **batching** logical **requests** for reducing network
traffic, comprising the steps of
(a) providing a group of business objects...

...3 A method as recited in claim 1, further comprising the steps of
unpackaging the **requests** from the message at a point across a
network and persisting data changes.

4 A method as recited in claim 1, further comprising the steps of.
receiving responses to the **requests** and bundling the responses into
a reply.

5 A method as recited in claim 1, ftirther comprising the step of
sorting the **requests** in the message.

6 A method as recited in claim 5, further comprising the step of
separating the **requests** in the messages into submessages.

7 A computer program embodied on a computer readable medium for
batching logical
requests for reducing network traffic, comprising:
(a) a code segment that provides a group of business...

...transaction in
a logical unit of work;
(c) a code segment that groups logically-related **requests** received
from the logical unit of. A computer program as recited in claim 7,
. further...

...computer program as recited in claim 7, further comprising a code
segment that unpackages the **requests** from the message at a point
across a network and a code segment that persists...

...as recited in claim 7, further comprising a code segment that receives
responses to the **requests** and a code segment that bundles the
responses into a reply.

11 A computer program as recited in claim 7, further comprising a code
segment that **sorts** the **requests** in the message.

12 A computer program as recited in claim I 1, further comprising a code
segment that separates the **requests** in the messages into
submessages.

13 A system for **batching** logical **requests** for reducing
network traffic, comprising: (a) logic that provides a group of business
objects necessary...

...to the transaction in a logical
unit of work;
(c) logic that groups logically-related **requests** received from the
logical unit of work into a
single network message;
(d) logic that...

...message.

15 A system as recited in claim 13, further comprising logic that
unpackages the **requests** from the message at a point across a
network and logic that persists data changes...

...A system as recited in claim 13, further comprising logic that receives
responses to the **requests** and logic that bundles the responses into
a reply.
17 A system as recited in claim 13, further comprising logic that
sorts the **requests** in the message.

18 A system as recited in claim 17, further comprising logic that
separates the **requests** in the messages into submessages.
624

 33/3,K/10   (Item 10 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT
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00784137
SYSTEM,   METHOD,   AND   ARTICLE OF MANUFACTURE   FOR DISTRIBUTED GARBAGE
    COLLECTION IN ENVIRONMENT SERVICES PATTERNS
SYSTEME, PROCEDE ET ARTICLE DE FABRICATION   EN MATIERE DE RECUPERATION
    D'ESPACE REPARTI DANS DES MOTIFS DE SERVICES D'ENVIRONNEMENT
Patent Applicant/Assignee:
  ACCENTURE LLP, 1661 Page Mill Road, Palo Alto, CA 94304, US, US
    (Residence), US (Nationality)
Inventor(s):
  BOWMAN-AMUAH Michel K, 6416 Peak Vista Circle, Colorado Springs, CO 80918
    , US,
Legal Representative:
  HICKMAN Paul L (agent), Oppenheimer Wolff & Donnelly, LLP, 1400 Page Mill
    Road, Palo Alto, CA 94304, US,
Patent and Priority Information (Country, Number, Date):
  Patent: WO 200116729 A2-A3 20010308 (WO 0116729)
  Application: WO 2000US24238 20000831 (PCT/WO US0024238)
  Priority Application: US 99386435 19990831
Designated States: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ
    DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ
    LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG
    SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW
    (EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE
    (OA) BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG
    (AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZW
    (EA) AM AZ BY KG KZ MD RU TJ TM
Publication Language: English
Filing Language: English
Fulltext Word Count: 150959

Fulltext Availability:
  Detailed Description
  Claims

Detailed Description
... technique is the use of prioritized circuits within Frame Relay, in
  which the Frame Relay **network** vendor **assigns** different
  priorities to different permanent virtual circuits.

  Prioritization techniques are of limited effectiveness if data
  independent channel is assigned its own periodic
  slot.
  frequency division **multiplexing** (FDM) - each independent channel is
  assigned its own frequency range, allowing all channels to be...

...rolled 1 5 back. When a transaction is committed, all changes made by
  the associated **requests** are made permanent. When a transaction is
  rolled back, all changes made by the associated **requests** are

undone.

Transaction Services provide the transaction integrity mechanism for the
application. This allows all...

...by the DBMS software with its re-start/recovery and integrity
capabilities.

188
For larger **client/server** environments distributed on-line
transaction managers might be more applicable. These transaction managers
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of users and can be more efficient than the DBMSs.

Figure...
...error information. Transaction Monitor Services, in conjunction with
Information Access and Communication Services provide for **load
balancing** across processors or machines and location transparency
for distributed transaction processing.

Implementation considerations
Does the...

...source messaging capabilities alone.

Does the system require high throughput?
189
Because TP monitors provide **load balancing** functionality and
because they effectively reduce the number of connections that must be
made to...are available on multiple platforms and maintain
interoperability (communication, data translation, etc.) between
heterogeneous resource **managers** (**databases**) and clients
(UNIX, MS Windows NT, etc.). For this reason, projects that intend to
support...

...do not need this feature can also benefit by using TP monitors. For
example, the **load-balancing** feature in itself can help
increase system performance. Also, the administrative facilities can help
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e.g. A system has several servers accepting **requests** from clients
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 33/3,K/11   (Item 11 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT
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00784136
A SYSTEM, METHOD AND ARTICLE OF MANUFACTURE FOR BUSINESS LOGIC SERVICES
    PATTERNS IN A NETCENTRIC ENVIRONMENT
SYSTEME, PROCEDE ET ARTICLE DE FABRICATION POUR STRUCTURES DE SERVICES DE
    LOGIQUE DE COMMERCE DANS UN ENVIRONNEMENT S'ARTICULANT AUTOUR DE
    L'INTERNET
Patent Applicant/Assignee:
  ACCENTURE LLP, 1661 Page Mill Road, Palo Alto, CA 94304, US, US
    (Residence), US (Nationality)
Inventor(s):
  BOWMAN-AMUAH Michel K, 6426 Peak Vista Circle, Colorado Springs, CO 80918
    , US,
Legal Representative:
  HICKMAN Paul L (agent), Oppenheimer Wolff & Donnelly, LLP, 38th Floor,
    2029 Century Park East, Los Angeles, CA 90067-3024, US,
Patent and Priority Information (Country, Number, Date):
  Patent: WO 200116728 A2-A3 20010308 (WO 0116728)
  Application: WO 2000US24197 20000831 (PCT/WO US0024197)
  Priority Application: US 99387658 19990831
Designated States: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ
  DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IS JP KE KG KP KR KZ LC
  LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI
  SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW
  (EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE
  (OA) BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG
  (AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZW
  (EA) AM AZ BY KG KZ MD RU TJ TM
Publication Language: English
Filing Language: English
Fulltext Word Count: 150863

Fulltext Availability:
  Detailed Description
  Claims

Detailed Description
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  Prioritization techniques are of limited effectiveness if data...

...share access to a physical network. Shared Access schemes include the
following.

CSMAICD - Carrier Sense **Multiple** Access with Collision Detection. A
method by which multiple nodes can access a shared physical...

...the right to transmit.

multiplexing - A method of sharing physical media among nodes by
consolidating **multiple**, independent channels into a single circuit.
The independent channels (assigned to nodes, applications, or voice
calls) can be combined in the following ways.

time division **multiplexing** (TDM) - use of a circuit is divided into
a series
of time slots, and each...committed or rolled back. When a transaction is
committed, all changes made by the associated **requests** are made
permanent. When a transaction is rolled back, all changes made by the
associated **requests** are undone.

Transaction Services provide the transaction integrity mechanism for the
application. This allows all...
...by the DBMS software with its re-start/recovery and integrity
capabilities.

186
For larger **client/server** environments distributed on-line
transaction managers might be more applicable. These transaction managers
provide sharing of **server processes** across a large community
of users and can be more efficient than the DBMSs.

Figure...

...error information. Transaction Monitor Services, in conjunction with
Information Access and Communication Services provide for **load
balancing** across processors or machines and location transparency
for distributed transaction processing.

Implementation considerations
Does the...

...source messaging capabilities alone.

Does the system require high throughput?
187
Because TP monitors provide **load balancing** functionality and
because they effectively reduce the number of connections that must be
made to...

...are available on multiple platforms and maintain interoperability
(communication, data translation, etc.) between heterogeneous resource
managers (databases) and clients (UNIX, MS Windows NT, etc.).
For this reason, projects that intend to support...monitors can access
databases and services running on mainframe systems. TP monitors
frequently include mainframe **networking** capability and maintain
transaction rollback during mainframe accesses. If access to the legacy
system is...

...this quality is a candidate for a TP monitor.

Is the system not a transaction **processing** system?
Although TP monitors provide global two-phase commit "transaction
processing" functionality, systems that do not need this feature can also
benefit by using TP monitors. For example, the **load-balancing**
feature in itself can help increase system performance. Also, the
administrative facilities can help simplify system management.
Is Data Dependent Routing Necessary?
Data Dependent Routing is the ability to route **requests** to a
particular server based upon the data passed within the **request**. TP
monitors can provide this functionality.

190
e.g. A system has several servers accepting **requests** from
clients dispersed across North America. There are two groups of
servers. One group of servers **handles requests** from all
clients located in the USA while the other group serves **requests**
from Canada. When a client sends a **request** to the system, a field
in the **request** message, defining the location of the client, is
passed to the system. The TP monitor is then able to route the
request to the correct group of servers (USA or Canada) based upon
information in the **request** message.

Is Reliable Queueing Necessary?
TP monitors provide the ability to enqueue and dequeue **requests** to
and from a reliable (stable storage) queue. Both the application and the
administrator can control the order of the messages (service
requests) in the queue. Messages can be ordered LIFO, FIFO, time
based, priority, or by some...
...can be forwarded to the home office via a WAN, and the updates can be
replicated in the home office database. The queuing system can be
used to assure that every...

...TOP END are best suited to fresh installations.

192
Does the system use PC-based **clients**?
Each TP monitor offers different support for PC-based clients. TUXEDO and
TOP END currently...in this practice aid, all of them offer varying
levels of mainframe connectivity.

Does the **client** have existing personnel with mainframes - CICS
experience? CICS/6000 has a programming interface similar to...

...transaction monitors.

BEA TUXEDO - provides a robust middleware engine for developing and
deploying business-cnitical **client/server** applications. BEA
TUXEDO handles not only distributed transaction processing, but also
application and the ftill...
...of the toolkit to
194
provide a comprehensive environment for developing and deploying
distributed transaction **processing**.

Microsofts Transaction **Server** (Viper) - a component-based
transaction

processing system for developing, deploying, and managing high
performance, and...

...applications (although many are on the way). Encina adds primarily a
transactional element. and some **load balancing** services to
RPC's. It also provides an easier interface to work with (although it...

...very scalable and services can be on any machine in the network.
Finally, Encina's **load balancing** is quite good, much better
then native DCE or Tuxedo.

Tuxedo
Functionality
Can handle a...
...prioritize messages- most important get processed sooner.

Supports many platforms (all UNIX, NT, all common **client**
platforins)
Tuxedo supports C, C++, and Cobol development
I 0 Can be used for basic...

...server
Peer-to-peer, client-to-client messaging is supported
Unsolicited messaging is supported for **client processes**
Asynchronous service calls can be made by **client** and **server
processes**
Synchronous service calls can be made by **client** and **server
processes**
Synchronous calls that receive no return message are supported
Very good security- must connect to...design.

Difficult to debug servers
Does not work well with Pure Software products: Purify, Quantify
Servers must be programmed to support client context data
management
198
Difficult to do asynch messaging...

...Services coordinate transactions across one or more resource managers
either on a single machine or **multiple** machines within the
network. Transaction **Management** Services ensure that all
resources for a transaction are updated, or in the case of...

...update failure on any one resource, all updates are rolled back.

This services that allow **multiple** applications to share data with
integrity. The transaction management services help implement the notion
of...

...a completed transaction are persistent.

199
Two-Phase Commit is a feature found in distributed **database
management** systems and online
I information integrity across distributed
transact on processing (OLTP) monitors to ensure...

...Services provide support for mapping a single logical transaction in an

application into the required **multiple** physical transactions. For
example, in a package or legacy rich environment, the single logical
transaction...

...applications can use to perform system-level functions. These services
include.

System Security Services, Profile **Management** Services, Task and
Memory Management Services, and Environinent Verification Services.

System Security 2710
System Security...can be stored in the profile file for flexibility. In
the future, if the database **server** name should change, this change
only needs to be entered in the applications profile file...

...free disk space, monitor resolution, correct version). These services
are invoked when an application begins **processing** or when a
component is called. Applications can use these services to verify that
the...

...versions of required Execution Architecture components and other
application components are available.
Implementation considerations
In **client/server** applications, it may be necessary to
implement Environment Verification Services to ensure that the
client and **server** applications are of a compatible release
level.

ActiveX framework provides services for automatic installation and...

...events to control individual computer tasks or processes, and manage
memory. They provide services for **scheduling,** starting, stopping,
and restarting both **client** and **server** tasks (e.g., software
agents).

204
Implementation considerations
Memory management, the allocating and freeing of...

...employees, customers) and additional types of transactions (e.g.,
e-commerce, help-desks). In traditional **client/server**
environments most users are employees of the company. In Netcentric
environments there are typically also...
...the development effort by reusing common services, etc. These
architecture functions perform services such as **database** calls,
state **management,** etc.

Application errors are also those which occur during the normal execution
of the application...

...may be for an intranet type application).

Logging can add much stress to a Web **server** and logs can grow very
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the term Context Management refers to storing state information on the
server, not the **client**). **Client/server**
architectures simplified or eliminated the need for Context Management
(storing state information on the server), and created a need to store

state information on the client. Typically, in traditional **client/
server** systems this type of state management (i.e., data sharing)
is done on the client...

...the client nor save any information between client exchanges (i.e., web
page submits or **requests**). Each HTTP exchange is a completely
independent event. Therefore, information entered into one HTML form...
...Advances in Netcentric technologies now offer additional options for
implementing state management on both the **client** and **server**
machines.

33/3,K/12   (Item 12 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT
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00784135
A SYSTEM, METHOD AND ARTICLE OF MANUFACTURE FOR A LOCALLY ADDRESSABLE
    INTERFACE IN A COMMUNICATION SERVICES PATTERNS ENVIRONMENT
SYSTEME, PROCEDE ET ARTICLE DE PRODUCTION METTANT EN OEUVRE UNE INTERFACE
    ADRESSABLE LOCALEMENT DANS UN ENVIRONNEMENT DE CONFIGURATIONS DE
    SERVICES DE COMMUNICATION
Patent Applicant/Assignee:
  ACCENTURE LLP, 1661 Page Mill Road, Palo Alto, CA 94304, US, US
    (Residence), US (Nationality)
Inventor(s):
  BOWMAN-AMUAH Michel K, 6426 Peak Vista Circle, Colorado Springs, CO 80918
    , US,
Legal Representative:
  HICKMAN Paul L (agent), Oppenheimer Wolff & Donnelly, LLP, 38th Floor,
    2029 Century Park East, Los Angeles, CA 09967-3024, US,
Patent and Priority Information (Country, Number, Date):
  Patent: WO 200116727 A2-A3 20010308 (WO 0116727)
  Application: WO 2000US24189 20000831 (PCT/WO US0024189)
  Priority Application: US 99387064 19990831
Designated States: AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES
  FI GB GE GH GM HR HU ID IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD
  MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG UZ
  VN YU ZW
  (EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE
  (OA) BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG
  (AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZW
  (EA) AM AZ BY KG KZ MD RU TJ TM
Publication Language: English
Filing Language: English
Fulltext Word Count: 151048

Fulltext Availability:
 Detailed Description
  Claims

Detailed Description
... technique is the use of prioritized circuits within Frame Relay, in
  which the Frame Relay **network** vendor **assigns** different
  priorities to different permanent virtual circuits.

Prioritization techniques are of limited effectiveness if data...

...a special control message) among nodes to designate which node has the right to transmit.

multiplexing - A method of sharing physical media among ...of time slots, and each independent channel is assigned its own periodic slot.

frequency division **multiplexing** (FDM) - each independent channel is assigned its own frequency range, allowing all channels to be...

...committed or rolled back. When a transaction is committed, all changes made by the associated **requests** are made permanent. When a transaction is rolled back, all changes made by the associated **requests** are undone.

Transaction Services provide the transaction integrity mechanism for the application. This allows all...

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BEA TUXEDO – provides a robust middleware engine for developing and
deploying business-critical **client/server** applications. BEA
TUXEDO handles not only distributed transaction processing, but also
application and the fall...
...IBMs CICS/6000 – an application server that provides
industrial-strength, online transaction processing and transaction
management for mission-critical
applications on both IBM and non-IBM platforms. CICS manages and
coordinates...

...of the toolkit to
195
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distributed transaction **processing**.

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then native DCE or Tuxedo.

Tuxedo
Functionality

Can handle a...

...client applications
196
Can handle a large volume of through-put (ex. 1000+ TPS)
Scaleable (**handle** many clients or a few without code rewrite)
Supports Transactions, including XA transactions
Has its...

...Future service delivery using /Q (usually for batch processing)
Can prioritize messages- most important get **processed** sooner.

Supports many platforms (all UNIX, NT, all common client platforms)
Tuxedo supports C, C...

...supported
Unsolicited messaging is supported for client processes
Asynchronous service calls can be made by **client** and **server**
processes
Synchronous service calls can be made by **client** and **server**
processes
Synchronous calls tha t receive no return message are supported
Very good security- must connect...A server can be called based on data
in the message (Data Dependent Routing) Customizable **server**
start-up and shutdown ftirictions are automatically called.

/Domains allow independent Tuxedo regions to share...

...get admin and system monitoring data for custom operation tools
JOLT Oava to access Tuxedo **servers**)
198
Other Reasons to Use Tuxedo
Tuxedo is the market leader OLTP
Tuxedo is a...

...can be very costly.

Single threaded servers requires an upfront packaging design.

Difficult to debug **servers**
Does not work well with Pure Software products: Purify, Quantify
Servers must be programmed to...

...Services coordinate transactions across one or more resource managers
either on a single machine or **multiple** machines within the
network. Transaction **Management** Services ensure that all
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traditional **client/server** systems this type of state
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page submits or **requests**). Each HTTP exchange is a completely
independent event. Therefore, information entered into one HTML form...

...Advances in Netcentric technologies now offer additional options for
implementing state management on both the **client** and **server**

machines.

...ARCHITECTURE
The report architecture within Environment Services supports the
generation and delivery of reports. Applications **request** report
services by sending a message to the reporting framework.

The following types of reports are supported by the reporting application
framework.

Scheduled: Scheduled reports are generated based upon a time
and/or date requirement.

These reports typically contain...
...and are generated periodically (invoices and bills, for example).

On-demand: Some reports will be **requested** by users with specific
parameters. The **scheduling** of these reports, the formatting, and/or
the data requirements are not known before the **request** is made, so
these factors must be **handled** at **request** time.

Event-driven: This report type includes reports whose generation is
triggered based on a...

...is the interface for reporting applications into the report
architecture. The client initiates a report **request** to the report
architecture by sending a message to the report initiation ftinction. The
responsibility of report initiation is to receive, identify, and validate
the **request** and then trigger the report build process. The main
components of reporting initiation are the following.

Receive, identify, and validate a report **request**. The
identification function determines general information about the
request, such as report type, **requester,** quantity to be
printed, and **requested** time. Based on the report type, a table of
reports is examined in order to gather additional report-specific
information and perform required validation routines for the report
request. After the report identification and validation functions
have been successfully completed, the reporting process can...

...any errors are identified, the report initiation function will return an
error message to the **requester** application.

Initiate report execution. The initiate report execution function
processes the report profile and specific...

...for the report. This function would utilize the Infori-nation Access
Services component of the **client/server** architecture.

Format the information. This ftinction is responsible for formatting the
collected information into the...

...function will locate completed report files and route them to the
appropriate devices within the **client/server** network.

Typically, a report distribution database is used to specify the

destinations for each report...
...architecture relates to a workstation platform technology architecture.

   This custom report process is responsible for **processing** all
   messages **requesting** generation, manipulation, or distribution of
   reports. The following services are provided in an environment including
   ...

...modules contain the logic to produce each of
226
   the report types that may be **requested**. The report process receives
   generation **requests** and ensures that they are forwarded to the
   report writer process at the current or specified time. All report
   requests are processed in an asynchronous manner (for example,
   service **requesters** do not wait for completion of report
   processing).

   Figure 31 describes the relationships between the...

...3100 and the report writer process 3102.

 33/3,K/13   (Item 13 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT
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00784134
A SYSTEM, METHOD AND ARTICLE OF MANUFACTURE FOR A CONSTANT CLASS COMPONENT
    IN A BUSINESS LOGIC SERVICES PATTERNS ENVIRONMENT
SYSTEME, PROCEDE ET ARTICLE MANUFACTURE UN COMPOSANT DE CLASSE DE CONSTANTE
    DANS UN ENVIRONNEMENT DE SCHEMAS DE SERVICES DE LOGIQUE D'AFFAIRES
Patent Applicant/Assignee:
   ACCENTURE LLP, 1661 Page Mill Road, Palo Alto, CA 94304, US, US
     (Residence), US (Nationality)
Inventor(s):
   BOWMAN-AMUAH Michel K, 6426 Peak Vista Circle, Colorado Springs, CO 80918
     , US,
Legal Representative:
   HICKMAN Paul L (agent), Oppenheimer Wolff & Donnelly LLP, Suite 3800,
     2029 Century Park East, Los Angeles, CA 90067-3024, US,
Patent and Priority Information (Country, Number, Date):
   Patent: WO 200116726 A2-A3 20010308 (WO 0116726)
   Application: WO 2000US24188 20000831 (PCT/WO US0024188)
   Priority Application: US 99387213 19990831
Designated States: AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES
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   (EA) AM AZ BY KG KZ MD RU TJ TM
Publication Language: English
Filing Language: English
Fulltext Word Count: 150446

Fulltext Availability:
  Detailed Description

Detailed Description
... etc.) to clients and servers. An intelligent communications fabric
  provides the following benefits.

  An intelligent **network** can **manage** itself, including
  addressing, routing, security, recovery, etc. It is inefficient for
  individual **clients** and **servers** to perform such tasks.

  168
  Specialized network components reduce the network-related processing
  that occurs on **clients** and **servers**.

  An intelligent network integrates heterogeneous **clients,**
  servers, and other resources by resolving incompatible protocols
  and standards.

  An intelligent network has the capability...examples of vendors of
  products that perform Transport-level encryption.

  routers.

  Cisco Systems
  177
  Bay **Networks**
  3Com Corp.

  firewalls.

  Check Point's Firewall-1
  Secure Computing's BorderWare Firewall Server
  Raptor...
...Systems' Eagle Firewall
  routers.

  178
  Cisco Systems
  Bay Networks
  3Com Corp.

  Network Address Allocation 2412
  Network Address Allocation services **manage** the distribution
  of addresses to network nodes.

  This provides more flexibility compared to having all...

...description of various Quality of Service parameters.

  179
  connection establishment delay - time between the connection
  request and a confirm
  being received by the **requester**
  connection establishment failure probability - chance that the connection
  will not be
  established within the maximum...

...to nodes, applications, or voice calls) can be combined in the following
ways.

time division **multiplexing** (TDM) - use of a circuit is divided into
a series
of time slots, and each independent channel is assigned its own periodic
slot.

frequency division **multiplexing** (FDM) - each independent channel is
assigned its own frequency range, allowing all channels to be...
T-carrier, E-carrier (e.g., TI, T3, El, E3)
TDM and FDM (Time Division **Multiplexing** and Frequency Division
Multiplexing; used
on T-carriers, etc.)
SONET, SDH
PPP, SLIP
184
V...

...committed or rolled back. When a transaction is committed, all changes
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191
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dispersed across North America. There are two groups of servers. One
group of servers **handles requests** from all clients located in
the USA while the other group serves **requests** from Canada. When a
client sends a **request** to the system, a field in the
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Supports Transactions, including XA transactions
Has its own transaction...

...message delivery using a stable storage queue (/Q)
Future service delivery using /Q (usually for **batch** processing)
Can prioritize messages- most important get processed sooner.

Supports many platforms (all UNIX, NT...

...Cobol development
Can be used for basic c/s messaging
Supports conversational messaging between a **client** and a specific
server
Peer-to-peer, **client**-to-client messaging is supported
Unsolicited messaging is supported for client processes
Asynchronous service calls can be made by **client** and **server**
processes
Synchronous service calls can be made by **client** and **server**
processes
Synchronous calls that receive no return message are supported
Very good security- must connect to...

...Application code can write to the ULOG with a Tuxedo API (error logging
provided) Automatic **process** monitor for **process** that die or
machines that get partitioned
Service location independency (distribution/directory services)
Platform independency...Services coordinate transactions across one or
more resource managers either on a single machine or **multiple**
machines within the **network**. Transaction **Management** Services
ensure that all resources for a transaction are updated, or in the case
of...

...a completed transaction are persistent.
200
Two-Phase Commit is a feature found in distributed **database**
management systems and online
information integrity across distributed
transaction processing (OLTP) monitors to ensure
databases. With...free disk space, monitor resolution, correct version).
These services are invoked when an application begins **processing** or
when a component is called. Applications can use these services to verify
that the...

...of required Execution Architecture components and other application
components are Rable.

aval
Implementation considerations
In **client/server** applications, it may be necessary to
implement Environment Verification Services to ensure that the
client and **server** applications are of a compatible release
level.

ActiveX framework provides services for automatic installation and...
...events to control individual computer tasks or processes, and manage
memory. They provide services for **scheduling**, starting, stopping,
and restarting both **client** and **server** tasks (e.g., software

agents).

205
Implementation considerations
Memory management, the allocating and freeing of...

...employees, customers) and additional types of transactions (e.g.,
e-commerce, help-desks). In traditional **client/server**
environments most users are employees of the company. In Netcentric
environments there are typically also...

...the development effort by reusing common services, etc. These
architecture functions perform services such as **database** calls,
state **management,** etc.

Application errors are also those which occur during the normal execution
of the application...computer (in this paper the term Context Management
refers to storing state information on the **server,** not the
client). Client/server architectures simplified or
eliminated the need for Context Management (storing state information on
the server), and created a need to store state information on the client.
Typically, in traditional **client/server** systems this type of
state management (i.e., data sharing) is done on the client...

...the client nor save any information between client exchanges (i.e., web
page submits or **requests).** Each HTTP exchange is a completely
independent event. Therefore, information entered into one HTML form...

...Advances in Netcentric technologies now offer additional options for
implementing state management on both the **client** and **server**
machines.

Possible Product Options
NetDynamics Inc. NetDynarnics
NetDynarnics Inc. NetDynamics
209
NetDynamics provides built-in...

...currently viewing can be maintained in the PE. NetDynamics maintains
state information on both the **server** and on the client page.
Application state information is maintained by the application server,
and...

...maintained?
Code/decode information can be stored at any layer of an n-tier
architecture - **client,** application **server,** or database. The
decision will need to be based upon codes table size and number...

...the client operate in different date/time zone?
In most large scale distributed applications, the **client** and the
server applications (or machines) are scattered over different time
zones. This forces the client applications and...standards. These
standards define how components should be built and how they should
communicate.

Object **Request** Broker (ORB) services, based on COM/DCOM and CORBA,
focus on how components communicate. Component...

...one of the more popular uses of OpenDoc tools is for creating and
   implementing OLE **clients** and **servers**. Because OpenDoc
   provides a more manageable set of APIs than OLE, it may be that...

...Environment (ONE) is an object-oriented software framework from Netscape
   Communications for use with Internet **clients** and **servers,**
   which enables the integrating of Web **clients** and **servers** with
   other enterprise resources and data. By supporting CORBA, ONE-enabled
   systems will be able...data within the domain of that component. For
   example, a Customer Domain component might be **requested** to
   detennine if it's credit limit had been exceeded when provided with a new
   ...

...services support the following.

   Managing documents in most formats such as HTML, Microsoft Word, etc.

   Handling of client **requests** for HTML pages. A Web browser
   initiates an HTTP **request** to the Web server either specifying the
   HTML document to send back to the browser...

   33/3,K/14   (Item 14 from file: 349)
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00784132
A SYSTEM, METHOD AND ARTICLE OF MANUFACTURE FOR A LEGACY WRAPPER IN A
    COMMUNICATION SERVICES PATTERNS ENVIRONMENT
SYSTEME, PROCEDE ET DISPOSITIF POUR MODULE D'HABILLAGE EXISTANT DANS UN
    ENVIRONNEMENT DE SCHEMAS DE SERVICES DE COMMUNICATION
Patent Applicant/Assignee:
  ACCENTURE LLP, 1661 Page Mill Road, Palo Alto, CA 94304, US, US
    (Residence), US (Nationality)
Inventor(s):
  BOWMAN-AMUAH Michel K, 6426 Peak Vista Circle, Colorado Springs, CO 80918
    , US,
Legal Representative:
  HICKMAN Paul L (agent), Oppenheimer Wolff & Donnelly, LLP, 1400 Page Mill
    Roadast, Palo Alto, CA 94304, US,
Patent and Priority Information (Country, Number, Date):
  Patent: WO 200116724 A2-A3 20010308 (WO 0116724)
  Application: WO 2000US24084 20000831 (PCT/WO US0024084)
  Priority Application: US 99386834 19990831
Designated States: AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CU CZ DE DK
   DZ EE ES FI GB GE GH GM HR HU ID IL IS JP KE KG KP KR KZ LC LK LR LS LT
   LU LV MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR
   TT UA UG UZ VN YU ZW
   (EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE
   (OA) BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG
   (AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZW
   (EA) AM AZ BY KG KZ MD RU TJ TM
Publication Language: English
Filing Language: English
Fulltext Word Count: 150947

Fulltext Availability:
  Detailed Description

Detailed Description
... is an example of a circuit-switching/packet-forwarding gateway.

  Lucent's Internet Telephony Server - **server** software that routes
  calls from PBXs over the Internet or intranets.

  Transport Security 2410
  Transport...

...Raptor Systems' Eagle Firewall
  routers.

  Cisco Systems
  Bay Networks
  3Corn Corp.

  Network Address Allocation 2412
  Network Address Allocation services **manage** the distribution
  of addresses to network nodes.

  This provides more flexibility compared to having all...a description of
  various Quality of Service parameters.

  connection establishment delay - time between the connection
  request and a confirm
  being received by the **requester**
  connection establishment failure probability - chance that the connection
  will not be
  established within the maximum...

...technique is the use of prioritized circuits within Frame Relay, in
  which the Frame Relay **network** vendor **assigns** different
  priorities to different pen-nanent virtual circuits.

  Prioritization techniques are of limited effectiveness if...T-carrier,
  E-carrier (e.g., Tl, T3, El, E3)
  TDM and FDM (Time Division **Multiplexing** and Frequency Division
  Multiplexing; used
  on T-carriers, etc.)
  SONET, SDH
  PPP, SLIP
  V.32@ V.34@ V.34...

...committed or rolled back. When a transaction is committed, all changes
  made by the associated **requests** are made
  187
  permanent. When a transaction is rolled back, all changes made by the
  associated **requests** are undone.

  Transaction Services provide the transaction integrity mechanism for the
  application. This allows all...

...the DBMS software with its re-start/recovery and inte i
  grity
  capabilities.

For larger **client/server** environments distributed on-line
transaction managers might be more applicable. These transaction managers
provide sharing of **server processes** across a large community
of users and can be more efficient than the DBMSs.

Figure...

...information. Transaction Monitor Services, in conjunction with
Infon-nation Access and Communication Services provide for **load
balancing** across processors or machines and location transparency
for distributed transaction processing.

Implementation considerations
Does the...

...data source messaging capabilities alone.

Does the system require high throughput?
Because TP monitors provide **load balancing** functionality and
because they effectively reduce the number of connections that must be
made to...are available on multiple platforms and maintain
interoperability (communication, data translation, etc.) between
heterogeneous resource **managers** (**databases**) and clients
(UNIX, MS Windows NT, etc.). For this reason, projects that intend to
support...

...not need this feature can also benefit by using TP monitors. For
example, the
191
load-balancing feature in itself can help increase system
performance. Also, the administrative facilities can help simplify system
management.

Is Data Dependent Routing Necessary?
Data Dependent Routing is the ability to route **requests** to a
particular server based upon the data passed within the **request**. TP
monitors can provide this functionality.

 33/3,K/16   (Item 16 from file: 349)
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00784125
SYSTEM, METHOD, AND ARTICLE OF MANUFACTURE FOR PIECEMEAL RETRIEVAL IN AN
    INFORMATION SERVICES PATTERNS ENVIRONMENT
SYSTEME, PROCEDE ET ARTICLE DE FABRICATION DESTINES A LA RECHERCHE
    FRAGMENTAIRE DANS UN ENVIRONNEMENT DE MODELES DE SERVICES
    D'INFORMATIONS
Patent Applicant/Assignee:
  ACCENTURE LLP, 1661 Page Mill Road, Palo Alto, CA 94304, US, US
    (Residence), US (Nationality)
Inventor(s):
  BOWMAN-AMUAH Michel K, 6426 Peak Vista Circle, Colorado Springs, CO 80918
    , US,

Fulltext Availability:
  Detailed Description
  Claims

Detailed Description
... a description of various Quality of Service parameters.

  connection establishment delay - time between the connection
  request and a confirm
  being received by the **requester**
  connection establishment failure probability - chance that the connection
  will not be
  established within the maximum...technique is the use of prioritized
  circuits within Frame Relay, in which the Frame Relay **network**
  vendor **assigns** different priorities to different permanent virtual
  circuits.

  Prioritization techniques are of limited effectiveness if data...

...include the following.

  CSMAICD - Carrier Sense Multiple Access with Collision Detection. A
  method by which **multiple** nodes can access a shared physical media
  by "listening" until no other transmissions are detected...

...to nodes, applications, or voice calls) can be combined in the following
  ways.

  time division **multiplexing** (TDM) - use of a circuit is divided into
  a series
  of time slots, and each...committed or rolled back. When a transaction is
  committed, all changes made by the associated **requests** are made
  186
  permanent. When a transaction is rolled back, all changes made by the
  associated **requests** are undone.

  Transaction Services provide the transaction integrity mechanism for the
  application. This allows all...

...provided by the DBMS software with its re-start/recovery and integrity
capabilities.

For larger **client/server** environments distributed on-line
transaction managers might be more applicable. These transaction managers
provide sharing of **server processes** across a large community
of users and can be more efficient than the DBMSs.

Figure...

...error information. Transaction Monitor Services, in conjunction with
Information Access and Communication Services provide for **load
balancing** across processors or machines and location transparency
for distributed transaction processing.

Implementation considerations
Does the...
...data source messaging capabilities alone.

Does the system require high throughput?
Because TP monitors provide **load balancing** functionality and
because they effectively reduce the number of connections that must be
made to...

...are available on multiple platforms and maintain interoperability
(communication, data translation, etc.) between heterogeneous resource
managers (**databases**) and clients (UNIX, MS Windows NT, etc.).
For this reason, projects that intend to support...system not a
transaction processing system?
Although TP monitors provide global two-phase commit "transaction
processing" functionality, systems that do not need this feature
can also benefit by using TP monitors. For example, the
190
load-balancing feature in itself can help increase system
performance. Also, the administrative facilities can help simplify system
management.

Is Data Dependent Routing Necessary?
Data Dependent Routing is the ability to route **requests** to a
particular server based upon the data passed within the **request**. TP
monitors can provide this functionality.

e.g. A system has several servers accepting **requests** from clients
dispersed across North America. There are two groups of servers. One
group of servers **handles requests** from all **clients**
located in the USA while the other group serves **requests** from
Canada. When a client sends a **request** to the system, a field in the
request message, defining the location of the client'. is passed to
the system. The TP monitor is then able to route the **request** to the
correct group of **servers** (USA or Canada) based upon information in
the **request** message.

Is Reliable Queueing Necessary?
TP monitors provide the ability to enqueue and dequeue **requests** to
and from a reliable (stable storage) queue. Both the application and the
administrator can control the order of the messages (service
requests) in the queue. Messages can be ordered LIFO, FIFO, time
based, priority, or by some...

...can be forwarded to the home office via a WAN, and the updates can be **replicated** in the home office database. The queuing system can be used to assure that every...transaction monitors.

BEA TUXEDO - provides a robust middleware engine for developing and deploying business-critical **client/server** applications. BEA TUXEDO handles not only distributed transaction processing, but also application and the full...

...and transaction management for mission-critical applications on both IBM and non-IBM platforms. CICS **manages** and coordinates all the different resources needed by applications, such as RDBMSs, files and message...

...fimctionality of the toolkit to provide a comprehensive environment for developing and deploying distributed transaction **processing**.

Microsofts Transaction **Server** (Viper) - a component-based transaction processing system for developing, deploying, and managing high performance, and...

...although many are on the way). Encina adds primarily a transactional element and some
195
load balancing services to RPC's. It also provides an easier interface to work with (although it...

...very scalable and services can be on any machine in the network. Finally, Encina's **load balancing** is quite good, much better then native DCE or Tuxedo.

Tuxedo
Functionality
Can handle a large number of concurrent **client** applications
Can handle a large volume of through-put (ex. 1000+ TPS)
Scaleable (handle many...

...Future service delivery using /Q (usually for batch processing) Can prioritize messages- most important get **processed** sooner.

Supports many platforms (all UNIX, NT, all common client platforms) Tuxedo supports C, C...

...supported
Unsolicited messaging is supported for client processes
Asynchronous service calls can be made by **client** and **server processes**
Synchronous service calls can be made by **client** and **server processes**
Synchronous calls that receive no return message are supported
Very good security- must connect to...

...Application code can write to the LTLOG with a Tuxedo API (error logging provided) Automatic **process** monitor for **process** that die or machines that get partitioned

Service location independency (distribution/directory services)
Platform independency...can be very costly.

Single threaded servers requires an upfront packaging design.

Difficult to debug **servers**
Does not work well with Pure Software products: Purify, Quantify
Servers must be programmed to...

...one or more resource managers either on a single machine or multiple
machines within the **network**. Transaction **Management** Services
ensure that all resources for a transaction are updated, or in the case
of...

...of a completed transaction are persistent.

Two-Phase Commit is a feature found in distributed **database**
management systems and online transaction processing (OLTP)
monitors to ensure information integrity across distributed databases.
With...

...changing a customer address may require the partitioning and
coordination of several physical transactions to **multiple**
application systems or databases. Transaction Partitioning Services
provide the application with a simple single transaction...

...occur across heterogenous
application servers and databases?
EXAMPLE.

In a given application, a single business **process** of updating a
customer record requires an update to a table in a UNIX based...of
required Execution Architecture components and other application
components are available.

Implementation considerations
204
In **client/server** applications, it may be necessary to
implement Environment Verification Services to ensure that the
client and **server** applications are of a compatible release
level.

 33/3,K/17   (Item 17 from file: 349)
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00784124
SYSTEM, METHOD, AND ARTICLE OF MANUFACTURE FOR A REQUEST SORTER IN A
    TRANSACTION SERVICES PATTERNS ENVIRONMENT
SYSTEME, PROCEDE ET ARTICLE DE FABRICATION APPLIQUES DANS UN TRIEUR DE
    REQUETES D'UN ENVIRONNEMENT DE STRUCTURES DE SERVICES DE TRANSACTIONS
Patent Applicant/Assignee:
  ACCENTURE LLP, 1661 Page Mill Road, Palo Alto, CA 94304, US, US
    (Residence), US (Nationality)
Inventor(s):

BOWMAN-AMUAH Michel K, 6426 Peak Vista Circle, Colorado Springs, CO 80918
    , US,
Legal Representative:
  HICKMAN Paul L (agent), Oppenheimer Wolff & Donnelly, LLP, 38th floor,
    2029 Century Park East, Los Angeles, CA 90067-3024, US,
Patent and Priority Information (Country, Number, Date):
  Patent: WO 200116704 A2-A3 20010308 (WO 0116704)
  Application: WO 2000US24082 20000831 (PCT/WO US0024082)
  Priority Application: US 99386715 19990831
Designated States: AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES
  FI GB GE GH GM HR HU ID IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD
  MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG UZ
  VN YU ZW
  (EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE
  (OA) BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG
  (AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZW
  (EA) AM AZ BY KG KZ MD RU TJ TM
Publication Language: English
Filing Language: English
Fulltext Word Count: 150733

Fulltext Availability:
  Detailed Description
  Claims

Detailed Description
... request. TP monitors can provide this functionality.

  e.g. A system has several servers accepting **requests** from clients
  dispersed across North America. There are two groups of servers. One
  group of servers **handles requests** from all clients located in
  the USA while the other group serves **requests** from Canada. When a
  client sends a **request** to the system, a field in the **request**
  message, defining the location of the client, is passed to the system.
  The TP monitor is then able to route the **request** to the correct
  group of servers (USA or Canada) based upon information in the
  request message.

  Is Reliable Queueing Necessary?
  TP monitors provide the ability to enqueue and dequeue **requests** to
  and from a reliable (stable storage) queue. Both the application and the
  administrator can control the order of the messages (service
  requests) in the queue. Messages can be ordered LIFO, FIFO, time
  based, priority, or by some...

...can be forwarded to the home office via a WAN, and the updates can be
replicated in the home office database. The queuing system can be
used to assure that every...transaction monitors.

  BEA TUXEDO - provides a robust middleware engine for developing and
  deploying business-critical **client/server** applications. BEA
  TUXEDO handles not only distributed transaction processing, but also
  application and the full...

...functionality of the toolkit to
  provide a comprehensive environment for developing and deploying
  distributed transaction **processing**.

Microsofts Transaction **Server** (Viper) - a component-based transaction
processing system for developing, deploying, and managing high
performance, and...

...of functions including security services, RPC's, a directory service
(like a yellow pages for **clients** to find services) and a standard
time service, and it is truly cross-platform and...

...although many are on the way). Encina adds primarily a transactional
element and some
195
load balancing services to RPC's. It also provides an easier
interface to work with (although it...

...very scalable and services can be on any machine in the network.
Finally, Encina's **load balancing** is quite good, much better
then native DCE or Tuxedo.

Tuxedo
Functionality
Can handle a large number of concurrent client applications
Can **handle** a large volume of through-put (ex. 1000+ TPS)
Scaleable (handle many clients or a...

...delivery using a stable storage queue (/Q)
Future service delivery using /Q (usually for batch **processing**)
Can prioritize messages- most important get processed sooner.

Supports many platforms (all UNIX, NT, all...

...server
Peer-to-peer, client-to-client messaging is supported
Unsolicited messaging is supported for **client** processes
Asynchronous service calls can be made by **client** and **server**
processes
Synchronous service calls can be made by **client** and **server**
processes
Synchronous calls that receive no return message are supported
Very good security- must connect to...

...that die or machines that get partitioned
Service location independency (distribution/directory services)
Platfonn independency- **handles** data conversion
Built in data compression (if desired)
Built in performance measurement feature for services...be used to
develop highly-available systems (24x7)
Has been implemented with PowerBuilder, VisualBasic, Motif **clients,**
and unix batch systems.

Cons of Using Tuxedo
Tuxedo for basic c/s messaging is...

...be understood thoroughly before design starts. If used incorrectly, can
be very costly.

Single threaded **servers** requires an upfront packaging design.

Difficult to debug **servers**
Does not work well with Pure Software products: Purify, Quantify
Servers must be programmed to...

...one or more resource managers either on a single machine or multiple
machines within the **network**. Transaction **Management** Services
ensure that all resources for a transaction are updated, or in the case
of...

...of a completed transaction are persistent.

Two-Phase Commit is a feature found in distributed **database
management** systems and online transaction processing (OLTP)
monitors to ensure information integrity across distributed databases.
With...

...Services pr6vide support for mapping a single logical transaction in an
application into the required **multiple** physical transactions. For
example, in a package or legacy rich environment, the single logical
transaction...database engine/server, it needs to know, during startup,
various inforination like - database name, the **server** name, login
ID, etc. - Instead of hard coding all these information in the
application executable...

...can be stored in the profile file for flexibility. In the future, if the
database **server** name should change, this change only needs to be
entered in the applications profile file...
...of required Execution Architecture components and other application
components are available.

Implementation considerations
204
In **client/server** applications, it may be necessary to
implement Environment Verification Services to ensure that the
client and **server** applications are of a compatible release
level.

Claim
hod for **sorting requests** that are being unbatched from
a batched message, comprising the steps of
(a) providing a group of business objects necessary for a transaction;
(b) grouping logically-related **requests** received from the business
objects;
(c) obtaining at least one of sorting rules and sort weights;
(d) **sorting** the **requests** in the message and placing them in a
specific order detennined from
the one of the sorting rules and the sort weights;
(e) **batching** the **sorted requests** into a single message;
(f) sending the message to a data server; and
(g) unbundling the **requests** from the message in the specific order.

2 A method as recited in claim 1, wherein a **request** is not allowed
to proceed until all dependent **requests** are completed.

3 A method as recited in claim 1, further comprising the step of
determining the class represented by each **request**, wherein the
sorting rules are based on a class type.
4 A method as recited in claim 1...

...as recited in claim 5, ftirther comprising the step of creating a linear
ordering of **requests** based on the referential integrity rules,
wherein the numbering of the position of the **request** in the linear
ordering is the weight of that **request**, wherein **requests** with
lower weights are processed before **requests** with higher weights.
622
. A computer program embodied on a computer readable medium for
sorting requests that
are being unbatched from a batched message, comprising:
(a) a code segment that provides...

...of business objects necessary for a transaction; (b) a code segment that
groups logically-related **requests** received from the business
objects; (c) a code segment that obtains at least one of sorting rules
and sort weights; (d) a code segment that **sorts** the **requests**
in the message and places them in a specific order
determined from the one of the sorting rules and the sort weights;
(e) a code segment that **batching** the **sorted requests**
into a single message;
(f) a code segment that sends the message to a data server;
(g) a code segment that unbundles the **requests** from the message in
the specific order.

8 A computer program as recited in claim 7, wherein a **request** is
not allowed to proceed until all dependent **requests** are completed.

9 A computer program as recited in claim 7, further comprising a code
segment that determines the class represented by each **request**,
wherein the **sorting** rules are based on a class type.

10 A computer program as recited in claim...

...in claim 1 1, further comprising a code segment that creates a linear
ordering of **requests** based on the referential integrity rules,
wherein the numbering of the position of the **request** in the linear
ordering is the weight of that **request**, wherein **requests** with
lower weights are processed before **requests** with higher weights.

13 A system for **sorting requests** that are being unbatched
from a batched message,
comprising:
623
(a) logic that provides a group of business objects necessary for a
transaction; (b) logic that groups logically-related **requests**
received from the business objects;
(c) logic that obtains at least one of sorting rules and sort weights;
(d) logic that **sorts** the **requests** in the message and places
them in a specific order determined
from the one of the sorting rules and the sort weights;
(e) logic that **batching** the **sorted requests** into a
single message;
(f) logic that sends the message to a data server;
(g) logic that unbundles the **requests** from the message in the

specific order.

14 A system as recited in claim 13, wherein a **request** is not
allowed to proceed until all dependent **requests** are completed.

15 A system as recited in claim 13, further comprising logic that
determines the class represented by each **request**, wherein the
sorting rules are based on a class type.

16 A system as recited in claim 13...
...system as recited in claim 17, further comprising logic that creates a
linear ordering of **requests** based on the referential integrity
rules, wherein the numbering of the position of the **request** in the
linear ordering is the weight of that **request**, wherein
requests with lower weights are processed before **requests**
with higher weights.

 33/3,K/18   (Item 18 from file: 349)
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00784119
A SYSTEM, METHOD AND ARTICLE OF MANUFACTURE FOR A REFRESHABLE PROXY POOL IN
    A COMMUNICATION ENVIRONMENT
SYSTEME, PROCEDE ET ARTICLE POUR GROUPE D'ELEMENTS MANDATAIRES (PROXY)
    RAFRAICHISSABLES DANS UN ENVIRONNEMENT A CONFIGURATIONS DE SERVICES DE
    COMMUNICATION
Patent Applicant/Assignee:
  ACCENTURE LLP, 1661 Page Mill Road, Palo Alto, CA 94304, US, US
    (Residence), US (Nationality)
Inventor(s):
  BOWMAN-AMUAH Michel K, 6426 Peak Vista Circle, Colorado Springs, CO 80918
    , US,
Legal Representative:
  HICKMAN Paul L (agent), Oppenheimer Wolff & Donnelly LLP, 1400 Page Mill
    Road, Palo Alto, CA 94304, US,
Patent and Priority Information (Country, Number, Date):
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  Application: WO 2000US24113 20000831 (PCT/WO US0024113)
  Priority Application: US 99386239 19990831
Designated States: AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE
  DK DM DZ EE ES FI GB GE GH GM HR HU ID IL IS JP KE KG KP KR KZ LC LK LR
  LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL
  TJ TM TR TT TZ UA UG UZ VN YU ZW
  (EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE
  (OA) BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG
  (AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZW
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Fulltext Availability:
  Claims

Claim
... consurner-to-business

transactions. To do this, the Web must
@volve into a full-blown **client/server** medium that can
ran your line-of-business applications (i.e., a delivery vehicle for...

...using object technology. For the same reason (i.e., standard
interfaces), it is possible to **request** a component's services from
any platform. That's not true of objects, unless they...to count,
reserve, and value anything it is associated with. Inventory could be
used to **manage** a variety of things: conference rooms, fixed assets,
work in process, finished goods, and leased...

...technology must be justified in business rather than technology terms.
In many cases, a traditional **client/server** solution can
deliver the benefits. This proves especially true for short-lived,
‛simple, or moderately...knowledge workers needing flexible navigation.
Reduces system test complexity and cost
In a few different **instances,** the object-oriented development
approach has significantly reduced system test complexity. In all these
cases the projects fell behind **schedule** due to learning curve, the
complexity of custom architecture development, and increased effort for
component...

...functionality and performance was much easier. For example, since less
code and data knowledge was **replicated** throughout the system,
global changes could often be made by making a change in one...core
business components that represent the business directly in software.
These components perform behaviors upon **request** by windows,
reports, or batch process control objects. The presence of a component
model distinguishes component-based systems from procedural, **client
/server** systems. In a procedural approach, there is no shared
business component model. 3o This typically...

...database vendor.
Architecture development must start early
A tension exists between scenarios andframeworks
As with **client/server,** architecture work must start early. As
noted above, this is particularly challenging because of the...or
application framework is a unique skill set distinct from purely
technical or functional skills.
Managing the domain component model requires new organization
approaches
In addition, the extensive reuse of a core business component model
requires an organization structure that **manages** it as a shared
resource. This creates a tension between the needs to support consistent
...

...more. It is also extremely important to have a significant percentage of
the team with **client/server** skills, to reduce additional
learning curves such as GUI design or **client/server**
architecture development.
Estimating and planning present new **management** challenges
Projects should allow timefor start-up costs and contingencies
There is still not enough...by increasing scope and team size. The
urgency of the business and the desire to **manage** development size
may sometimes favor an incremental approach.
Commercially available methodologies have a narrow focus...

...component-based system and the variety of technologies associated with

it complicate testing and configuration **management**. A
componentbased system may often have more than ten times as many
components as a...

...generally demand even more and deeper skills, unless the team has
exceptionally talented individuals, extensive **client/server**
experience, and ample time to scale the learning curve. It is important
to note that...common to those who have successfully scaled the
component management learning curve include:
Experience with **client/server** development and a technical
orientation
293
Willingness and flexibility to learn new terminology, tools, and...

...giving people appropriate mentoring and support. Many technology
architects are simply not well equipped to **handle** the tutoring,
coaching, and communications demands inherent in component-based
development. Avoid starting inexperienced people...

...roles. While the dual role of building and supporting an architecture
exists in a traditional **client/server** system, it may be more
pronounced with component technology. Component-based systems require a
higher...the training needs during nonnal work hours for the system to
meet a reasonable
299
schedule. Thus, at times, individuals ...people must integrate
smoothly. This complicates increasing the team size. If a project slips
off- **schedule,** caution should be exercised in adding people.
Brook's
fundamental law states:
Adding more people...The need to start architecture implementation early
is well-understood for traditional or component-based **client/**
server development. What is different with component-based
development, however, is the need for the component...specifications.
Architecture development must start early
A tension exists between use cases andframeworks
As with **client/server,** architecture work must start early. As
noted above, this is particularly challenging because of the...of window
functionality, development can proceed very similar to that of a I 0
traditional, **client/ server** GUI project. Particularly early
in development, many aspects of the methodology can be very similar...

...based development and more related to challenges naturally resulting
from unfamiliarity. What is now "traditional" **client/server**
development faced similar difficulties years ago. In some cases, this
unknown requires experimentation. For example...

...whether to use messaging, remote procedure calls, or shipped SQL

 33/3,K/19   (Item 19 from file: 349)
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00761431
A SYSTEM, METHOD, AND ARTICLE OF MANUFACTURE FOR PROVIDING COMMERCE-RELATED

WEB APPLICATION SERVICES
SYSTEME, PROCEDE ET ARTICLE MANUFACTURE DESTINES A LA FOURNITURE DE
    SERVICES D'APPLICATION DANS LE WEB LIES AU COMMERCE
Patent Applicant/Assignee:
  ACCENTURE LLP, 100 South Wacker Drive, Chicago, IL 60606, US, US
    (Residence), US (Nationality)
Inventor(s):
  GUHEEN Michael F, 2218 Mar East Street, Tiburon, CA 94920, US,
  MITCHELL James D, 3004 Alma, Manhattan Beach, CA 90266, US,
  BARRESE James J, 757 Pine Avenue, San Jose, CA 95125, US,
Legal Representative:
  BRUESS Steven C (agent), Merchant & Gould P.C., P.O. Box 2903,
    Minneapolis, MN 55402-0903, US,
Patent and Priority Information (Country, Number, Date):
  Patent: WO 200073957 A2-A3 20001207 (WO 0073957)
  Application: WO 2000US14420 20000525 (PCT/WO US0014420)
  Priority Application: US 99321492 19990527
Designated States: AE AG AL AM AT AT (utility model) AU AZ BA BB BG BR BY
  CA CH CN CR CU CZ CZ (utility model) DE DE (utility model) DK DK (utility
  model) DM DZ EE EE (utility model) ES FI FI (utility model) GB GD GE GH
  GM HR HU ID IL IN IS JP KE KG KP KR KR (utility model) KZ LC LK LR LS LT
  LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SK
  (utility model) SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW
  (EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE
  (OA) BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG
  (AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZW
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  Detailed Description
  Claims

Detailed Description
... an object and a class of objects at this point. An object is a single
  instance of the class of objects, which is oftenjust called a
  class. A class of objects...execute within a Java-compatible browser
  (e.g., Netscape Navigator) by copying code from the **server** to
  client. From a language standpoint, Java's core feature set is
  based on C++.

  Sun's...

...in the analysis, design, construction, and maintenance of business
  systems, as well as the associated **management** processes. The ...0
  Remigration to system test of a cycle, because the impact analysis for a
  change **request** was incomplete
  * **Requesting** support from another team (for example, environment
  support,
  information management) and waiting unnecessarily for a...

...functions are defined as.

  The Information Management team 202
  The Quality team 204
  The Environment **Management** team 206

* The Release **Management** team 208
  The Configuration **Management** team 210
  The Problem **Management** team 212
  The Program and Project Management teams 214
  The Security Management team 216
Together...an Internet-based online banking system are far greater than
those of a fully isolated **client/server** system, and therefore
warrant a larger team with broader responsibilities and greater
influence.

More details...

...The following are not included.

" Performance of daily backups – this is handled by the Environment
Management team
0 **Database** administration – this is part of the Architecture team
responsibilities
" Performance tuning of the information repositories...

...of deliverables. As such, it is responsible for.

  Planning and control of delivery
  Milestones and **schedule**
  Resource consumption
  Risk and quality (at deliverable level)
Configuration Management
The Configuration Management team is...will implement the IDEA framework.

The Technology Infrastructure team is responsible for.

Data design and **management**
Database administration
Database tuning
Execution architecture design and construction
Development architecture design and construction
Operations architecture design and...very useful. Other samples may
include logs, which demonstrate interaction with tools, a sample change
request, or a sample **request** for technical support. Samples
can sometimes be created efficiently by taking screen dumps.

This can...50
  Monitoring and controlling update activities in the repository
  Receiving and validating data element change **requests**
  Creating and modifying data elements
  Enforcing project standards regarding repository objects
0 Validating the contents...

...at the end of each day. Increased control can be obtained by having
designers submit **requests** for new data elements to the repository
administrator. This allows the repository manager to evaluate...

...whether an existing one should be used.

Repository Maintenance
a) Creating and maintaining data elements
Requests for data element changes can be forwarded using a database
or paperbased system. Based on functional and technical knowledge, the

repository administrator evaluates the **requests** and may involve
other teams to make appropriate decisions.

The database used to **request** data element changes during design and
programming should be separate from the project' s change **request**
database. This will simplify and speed up the change process. When data
elements have to...

...changed during system test, however, the impact can be much greater, and
the regular change **request** database should be used.

Whenever a data element is changed, impact analysis must be performed...0
Define the opportunity selection process
0 Identify the resource allocation process
0 Define the **scheduling** process
0 Identify how the effort will be monitored
0 Identify the procedure for communicating...

...support the process
0 Prioritize and classify opportunities
0 Select projects
0 Allocate resources and **scheduling**
0 Monitor effort
0 Support a standard process improvement process across the project
While maintaining...Standards and Procedures
The Capability Maturity Model (CMM) for Software describes the software
engineering and **management** practices that characterize
organizations as they mature their processes for developing and
maintaining software.

58...

...Management focuses on providing specific deliverables through balanced
management of scope, quality, effort, risk, and **schedule**. Project
Management processes follow a cycle of planning the project's execution,
'organizing its resources...a package.

b) Version Control (1 14)
Version control and compatibility are key considerations when
managing these packages. Note that version control not only applies
to software components, but also to...

...packages or consistent configurations from one stage to another is a
central part of Configuration **Management**. The key to successful
migration is the knowledge of what constitutes each stage. Examples of...

...the package is eventually released to the production environment.

d) Change control (1 18)
Change **requests** as a consequence of changing requirements and
changes **requested** due to nonconformities (or defects), either in
the application software, or in the system software must be analyzed,
authorized, **scheduled,** staffed, and tracked in a defined way.

What, why, when, and who made a change...

...is remigrated to a given development stage.
It is important to link the general change **request** with the

requests produced during formal testing phases. This makes the
processes clearer.

Configuration Management becomes more complex...It should specify the
following.

The responsibility of the Environment Management team
How developers should **request** technical support
How quickly a **request** for support will be serviced
How the Environment Management team will notify developers of
environment...

...The SLA should also specify how to measure this service (for example,
system response times, **request** service times, backup frequencies).
In addition, the SLA must be
66
managed. It may have group and the developers. The Help Desk makes sure
that questions are answered and **requests** serviced in a timely
manner by the right people. In a complex, leading-edge environment...

...software are introduced, and compatibility issues arise. Part of the
coordination is the tracking of **request** IDs, which refer to the
same question but which are assigned differently by each supplier...

...Production Control
In the development environment, a number of activities must be performed
according to **schedule,** including.

Reorganization of databases, including the repository
Rerunning of database statistics
Performing backups
Transportation of...

...file transfers between environments/sites
Preventive maintenance of equipment
Many of these activities can be **scheduled** and performed
automatically, but must have some level of manual control to ensure that
they...

...that outside suppliers are strongly motivated to abide by the agreement.

Service Plannin (124)
Service **Management**
Systems **Management**
Managing Change
MODE divides Service Planning into.

Service Management Planning
Systems Management Planning
Managing Change Planning...resources and training to ensure that they are
equipped to deliver service as agreed.

Systems **Management** Planning
Daily tasks must be specified, assigned, and followed up. Systems
management planning determines who...

...Controlling Change, Testing Change, and Implementing Change.

Controlling Change
1 5 After planning for and **scheduling** change, it must be
controlled. This ties in closely with Configuration Management.

Testing Change
Thorough...
...the risk of productivity loss due to environment changes. Techniques
commonly used include.

0 Careful **scheduling** of events to minimize disruptions (typically
weekends and evenings are used to enable a strictly...design may occur
after system test starts, as in the case of an urgent change
request, or when a significant inconsistency is detected in system
test. Some reverse engineering work may...

...sense, usability is the thoughtful, deliberate design approach that
considers users throughout the solutions-building **process,** from
start to finish. For this reason, usability guidelines should be defined
and followed at...Procedures
System test relies heavily on configuration management, repository
management, and quality management.

0 Configuration **management** provides the basis for promoting a
configuration from the construction environment to the system test...

...test environment)
Run test cycle
Compare expected results and actual results
0 Log System Investigation **Requests** (SIRs)
4' Analyze deviations and identify components requiring change (either
expected results, test-data, or system components)
Define Change **Requests** (CRs) and perform impact analysis
Package those change **requests** that affect the same areas and that
naturally
belong together, into change packages
Schedule and staff the changes
Unlock components for change
81
Perform changes and refine impact analysis...properly.

Assembly test ensures that data is passed correctly between screens in a
conversation or **batch** process and that messages are passed
correctly between a **client** and a **server**. The specification
tested is the technical design. The application flow diagram within the
technical design...

...test, release test, or the conversion test. The operational readiness
test becomes especially key in **client/server** environments. It
has four parts.
* Roll out test - ensures that the roll out procedures and...

...tools 204 support all quality management processes
Program and Project Management tools 214 assist the **management**
teams in their daily work
" Environment Management tools 206 provide the facilities to maintain the
development environment
" Release Management tools 218 manages the simultaneous development of
multiple releases

" Configuration **Management** tools 210 cover the version control, migration control and change control of system components such...tools.

Specifically, productivity tools include.

33/3,K/20   (Item 20 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT
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00488451   **Image available**
INTEGRATED   CUSTOMER   INTERFACE   FOR   WEB   BASED   COMMUNICATIONS   NETWORK
    MANAGEMENT
INTERFACE   CLIENT   INTEGREE   POUR   LA   GESTION DE RESEAUX DE COMMUNICATIONS
    BASES SUR LE WEB
Patent Applicant/Assignee:
  BARRY B Reilly,
  CHODORONEK Mark A,
  DEROSE Eric,
  GONZALES Mark N,
  JAMES Angela R,
  LEVY Lynne,
  TUSA Michael,
Inventor(s):
  BARRY B Reilly,
  CHODORONEK Mark A,
  DEROSE Eric,
  GONZALES Mark N,
  JAMES Angela R,
  LEVY Lynne,
  TUSA Michael,
Patent and Priority Information (Country, Number, Date):
  Patent: WO 9919803 A1 19990422
  Application: WO 98US20173 19980925   (PCT/WO US9820173)
  Priority Application: US 9760655 19970926
Designated States: AU BR CA JP MX SG AT BE CH CY DE DK ES FI FR GB GR IE IT
  LU MC NL PT SE
Publication Language: English
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Fulltext Availability:
  Detailed Description
  Claims

Detailed Description
...   by selecting the
  "Remove All" button 2461f.

As an example, a "List Tickets by Status **Request**"
transaction will provide all the tickets for a given
organization (ORG) code with the **requested** status and
created after a specified date. The ORG code to be
passed in this...
...for future processing.

Generally, only one type of status may be specified in

a single **request**: Open, Closed, Referred or Cancelled
status. If a customer has authority over more than one...

...organization, then
he/she has implied access to all the subordinate
organizations meaning that the **request** will apply to
the subordinate organizations as well, Furthermore,
this transaction may only display some...

...RULE 26)
details/fields of the tickets which means that the data
cached from this **request** may only be used to process
the Queries on tickets. It cannot be used to...menu bar or
double click the ticket in the query results.

Particularly, a "Display Ticket **Request** Transaction"
(CSM/SI transaction) may be used to obtain the details,
activities and remarks of a ticket. This transaction
allows several display **requests** to be made, e.g., by
setting corresponding flags to 'Y', Whenever the
customer wishes to view details, remarks or activities
of a particular ticket, this **request** will be made with
all the three flags set and the ticket number stuck
SUBSTITUTE...

...the "Find" button 2453 from the tool bar
2450, the CSM/SI Transaction, "Display Ticket **Request**
Transaction" is invoked, where the ticket number is
passed on the **request** for **handling** as described above.

It should be understood that, in the preferred
embodiment, a "Change Ticket **Request** Transaction" may
be implemented allowing the customer to change some of
@.he fields of a...allows the customer to add remarks to that Ticket.

Thus, by implementing an "Add Remarks **Request**
Transaction," the customer may add remarks on a ticket
that is in an open status...appropriate questions. once all
the required information is available, the system
performs an "Open Ticket **Request** Transaction" and
passes all of the data fields. The CSM legacy system
then attempts to...

...the
ticket number is displayed to the customer.

As an example, to create a service **request** from
scratch, the customer may select, for example, the
"Create" button 2451 from the tool...

...up front and stored in the User Profile. This
is done using an "Enter Activity **Request** Transaction"
which allows the customer to enter different activities
like 'Refer Out', 'Close', 'Refer Back...

...the SI application allows the customer to
close the ticket by using an "Enter Activity **Request**
Transaction" described with respect to ticket creation.

When a customer wishes to close a ticket...the ticket back to the
enterprise (MCI).

This is also accomplished using the Enter Activity
Request Transaction. Again, the system will make this
transaction and pass the activity code for 'Refer...

...Figure 25(m), the TroubleTicket 2610
is the root of the Service Inquiry DOM. TroubleTicket
instances contain identifying information that is used
by the presentation layer to sort and filter a
collection of TroubleTickets. The TroubleTicket class
is responsible for accepting **requests** from the
presentation layer, forwarding the **requests** to the
backend and returning results to the presentation
layer. In addition to maintaining identifying...

...Remarks, Details and
Activities in CSM. Remarks and Details are also
represented by vectors of **instances** of a
"RegistryEntry" class. Activities are represented by a
vector of   **instances** of the Activity class 2660 which is
an information holder having **instance** variables
containing information that corresponds to fields in
the CSM/SI Activity Record.
The RegistryEntry class is a class in the
ServiceInquiry DOM comprising **instances** 2640a that are
used by Question **instances** 2630 and **instances** 2640b,c
used by Registry **instances** 2650. When used by a
Question, RegistryEntry **instances** 2640 represent the
possible choices for answers to the Question. Once the
user selects a RegistryEntry "choice," this
RegistryEntry **instance** becomes the answer to the
question. When used by a Registry, the RegistryEntry
instances 2640b,c represent remark or detail
information respectively, that is retrieved from
CSM/SI. Specifically, RegistryEntry 2640a,b,c comprise
the following **instance** variables: 1) a Text **instance**
variable which is an optional variable used to specify
SUBSTITUTE SHEET (RULE 26)
text that...

...a Question if the value is different than
that specified by the registryValue; 2) registryKey
instance variable which maps to a key in CSM/SI; 3) a
registryValue **instance** variable which maps to the value
in CSM/SI specified by the key in registryKey; 4) a
nextGroupID **instance** variable which is an optional
field used by the Question to assist the QuestionTree
in some navigational tasks; and 5) a question **instance**
variable which is a reference to the Question **instance**
to which this RegistryEntry belongs. A RegistryEntry
is contained by its Question; this **instance** variable is
a back-pointer.

The Registry Classes, i.e., classes that represent
CSM/SI...

...field record
  format; Service Inquiry requires Remark, Detail and
  Activity information in Java object format (**instances**
  of RegistryEntry or Activity). To provide these two
  formats, the Registry Classes contain behavior to
  convert **instances** to fixed-length field record format
  and to instantiate themselves from fixed-length field
  record...

...to which it
  belongs. A Question has a vector of RegistryEntry
  SUBSTITUTE SHEET (RULE 26)
  instances 2640a called choices. When the user
  "answers" the Question, the answer is set to the...

...the
  user. As a Registry Entry may contain a nextGroupID,
  the nextGroupID of the RegistryEntry **instance** selected
  as an answer to a decision point Question is used to
  derive the next...excluded from the group.

  TFNM
  As mentioned above, another application of the
  suite of telecommunications **network management**
  applications is the toll free **network management** tool
  SUBSTITUTE SHEET (RULE 26)
  as shown in Figure 26. Referred to herein as
  "TFNM," the toll free **network management** tool 200
  provides the client GUI and middle-tier service that
  enable customers to **request**, specify, receive and view
  data pertaining to their toll free **network management**
  assets, e.g., toll free number routing plans, and to
  generate orders for changing aspects...referred to as "CORMI" (Common
  Objects RMI) which
  provides an RMI-like interface between the **client** and
  the **server** using the networkMCI Interact protocol. The
  CORMI procedures implemented have additional controls
  built in to...

...communication over the firewalls.

  More specifically, CORMI is nMCI Interact's
  protocol for providing secure, **client**-to-**server**
  communication with Java RMI-like semantics and
  comprises a library of Java classes used by both the
  client applet and **server** application. In view of
  Figure 26, the communication path from the **client** and
  the **server** is as follows.

  The TFNM server application 840 registers remote
  objects with CORMI's CORemoteSessionServer...

...robin protocol to
  select a TFNM server and then opens an HTTPS connection
  to an **instance** of the TFNM server application. on this
  server, the CORemoteSessionServer creates a new session
  for...invocations are handled by CORMI as

COSynchTransactions through the dispatcher to the same
TFNM server **instance** that the logon and interface
lookup took place at.

It should be understood that there is no permanent
connection between the TFNM **client** and **server**; CORMI,
through a COSynchTransaction, creates a new HTTPS
connection to the dispatcher (and the dispatcher...

...with
the nMCI Interact home page (Figure 5(a)) whereby the
user may select the **Network Manager** icon 89 to enter
into the TFNM system. Upon selection of the **Network
Manager** icon, a client TFNM application is downloaded
to the customer who is presented with the...

...accordance with that user's
privileges. To determine privileges, TFNM user
security profile information is **requested** from StarOE
that comprises a list of Corp Ids and AccessId
combinations, referred to herein NetCap 290
requesting a user security profile. Particularly, the
messaging system implemented for all communications
between the TFNM...

...provided in the TFNM
database, or, if the information in TFNM is not
current. For **instance,** for some messages, a data sync
may always be invoked. Thus, TFNM may contact NetCap...

...Registry messaging to NetCap. The
SUBSTITUTE SHEET (RULE 26)
Registry message call "NPSNC" is the **request** to sync a
plan and is transmitted from the TFNM server to NetCap.

There are a variety of Registry response messages for
this **request.**

As shown in Figure 27(d), the File/Select Corp ID
menu option causes a...

Claim
1 An integrated system for providing a plurality
of communications **network management** services and
products to a customer over the public internet, said
network management services and products accessible
from a client workstation employing a client browser
associated with said...

...integrated within said
web based GUI and enabling interactive communications
with one or more communications **network management**
resources provided by said communications service
enterprise via a secure web server; and,
SUBSTITUTE SHEET (RULE 26)
(c) each said secure web server supporting

communication of **request** messages entered by said
customer via said customer interface to said one or
more **network management** resources capable of providing
a desired communications **network management** function;
wherein said one or more remote application resource
processes said **request** messages and provides responses
to said one or more secure web servers for secure
uploading...

...said client browser and display via said
integrated customer interface, thereby enabling a
customer to **manage** its communications **network** assets.

· 2 The integrated system as claimed in claim 1.
  wherein said one or more...

...claimed in claim 2,
  wherein said system includes digital certificates to
  authenticate a secure web **server** to said **client** web
  browser.

5 The integrated system as claimed in Claim 2,
  wherein said downloaded web...

...interoperate with one another to provide
  said integrated customer interface to a plurality of
  communications **network management** products and services
  SUBSTITUTE SHEET (RULE 26)
  subscribed by the customer.

6 The integrated system as claimed in claim 5,
  wherein a **network management** resource comprises a
  server for providing a customer authentication function
  and for downloading a logon...

 33/3,K/21   (Item 21 from file: 349)
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00484627
INTEGRATED BUSINESS SYSTEM FOR WEB BASED TELECOMMUNICATIONS MANAGEMENT
SYSTEME   D'ECHANGES   COMMERCIAUX   INTEGRES   POUR   LA   GESTION   DE
    TELECOMMUNICATIONS SUR LE WEB
Patent Applicant/Assignee:
  BARRY B Reilly,
  CHODORONEK Mark A,
  DeROSE Eric,
  GONZALES Mark N,
  JAMES Angela R,
  LEVY Lynne,
  TUSA Michael,
Inventor(s):
  BARRY B Reilly,
  CHODORONEK Mark A,
  DeROSE Eric,

GONZALES Mark N,
JAMES Angela R,
LEVY Lynne,
TUSA Michael,
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  Detailed Description
  Claims

Detailed Description
... can be performed on the data displayed in a
  spreadsheet including such dynamic operations as
  sorting of report data, sub-totaling of report data,
  etc.. Furthermore, the report viewer 215 is...

...a geographic view as one of the
  graph/chart types.

  An overview of the report **request/scheduling**
  process 600 implemented by StarWRS Report Manager and
  Report **Requestor** tools will now be described.

  After preliminary logon, authentication and
  verification of StarWRS web based report **requestor** web page.

  Figure 12(a) illustrates an exemplar dialog box
  1550 provided on the re ort **requestor** web page that is
  presented to the user Nter the logon and
  authentication process. From...user report selections,
  if a report had already been created and maintained in
  the report **manager database**, it will be dinlard in
  the report inventory field 1568 of Figure I (a
  Referring...

...report title, by selecting @ield 571a, report
  description, by selecting field 1571b, and the report
  schedule, by selecting field 1571c. For the example
  selection of report title customization shown in
  Figure...the right hand field
  15EO with the existing report values.
  . When selecti.n the report **schedule** 1571c, the
  user is,3resented wit% a screen 1597, as shown in
  Figure (c). The...

...field 1580 includes: selection of time
  zone, by menu choice 1582; selection of the report
  schedule radio buttons 1583 to specify the report as
  recurring, daily, weekly, monthly, or hourly entry...that user's email
  address.

As mentioned above with respect to Figure 10,
the Report **Requestor** client application 212 gains
access to the metadata stored at the Report Manager
server 250 throug@ messaging. Particularly, as
hereinafter described, a message generated by the
Report **Requestor** in accordance with the user re uest
is first received by the report manager proxy...

...a parser object tool is employed to
decompose the Metadata messages sent by the report
requestor 212 to validate the message. If errors are
found in the Metadata input, the RM...
...an
error message to the requesting client. If the
Metadata passes the validation tests, the **request** tyEe
is then determined and the appropriate service will e
invoked after which a standard response is sent back
to the **requesting** client.

The Report Manager 250 implements stored
procedures to translate the message,crrform the
request, and send the information ba to the Report
Requestor 212 which uses the metadata to determine
what a standard report should look like, the...

...standard template reports is based on the
user's entitlements.

The following types of metadata **requests** and
responses that may be generated by the StarWRS Report
Requestor 212 and Report Manager 250 components
include: 1) Get/Send report template list (GRTL/SRTL)
which **request** enables retrieval of the list of all
standard report templates for all products and is...
...e.g.,
report title, description, etc.; 2) Get/Send repqrt
template detail (GRTD@SRTD) - which **request** retrieves
the details of a specific standard report template; 3)
Get/Send user report list (GURL/SURL) - which **request**
retrieves the list of all user reports for the report
.format selected from a user report table and is used
only as a **request** for general report information,
e.g., report title, status, etc.; 4) Get/Send user
report detail (GURD@SURD)- which **request** retrieves the
details of a specific user,s report; 5) Add report
definition/Acknowledgment (ARD/ARDA)- which **requests**
addition of a user-created re ort to a user reEgrt
table. If the report is a scEeduled re@ort, t is
request is also communicated to the ful illing server
at the time the report is due...

...user-created report from the user tagle; 7)
Copy report definition/Acknowledgment (CRD/CRDA)
which.**request** creates a duplication of the report the
user is editing (other than the report title) and
creates a new report ID for it; 8) Update Reporting
Schedule/Acknowledgment (URD/URDA) - which **request**
updates the **scheduling** information on a report without

having to send a Delete and Add request; and, 9) Get
Pick List/Acknowledgment (GPL)- which request enables
the Report **Requestor** 212 to get a pick list provided
by StarOE server.

Having described the functionality of...

...client has sent a valid
message, the appropriate member function is invoked to
service the **request**. The response is built inside the
esgl wrapper function after obtaining the necessary
information through the stored procedure from the RM
database. The Re@)ort **Manager** creates the
RMServerSocket ob@ect and sends the ARDA message back
to the client. Wrien...

Claim
... said
customer's entitlements have been verified;
(d) said plurality of system resources
including a **network manager** which **manages** the routing
of the customer's traffic over the communications
network, and a view application to review said **network**
traffic, said **network manager** and said view
application responsive to proxy **requests** from said
dispatch server to enable the customer to command and
control the communications network...

...in Claim 1, wherein said switched
communications connections further includes switched
voice traffic and said **network manager** may command and
control said switched voice traffic.

3 The integrated and secure system for...

...2, wherein said switched voice
traffic further includes switched toll free voice
traffic and said **network manager** includes a toll free
network manager application to command and control the
routing of said switched voice traffic.

4 The integrated...

...said switched voice
83
traffic further includes switched call cen@er voice
traffic and said **network manager** includes a call
manager application to command and control the routing
of said switched voice...

...for
conducting business over-the public Internet as
claimed in Claim 2, wherein said network **manager**
includes an outbound **network manager** to command and
control said switched toll traffic.

6 The integrated and secure system for...

...1, wherein said switched
communications connections further includes switched
voice and data communications and said **network manager**
may command and control said switched voice
communications.

7 The integrated and secure system for...to separate
communications network services provided to the
customer by the enterprise;
(d) a report **requestor** for enabling the
customer to **request** reports from said plurality of
system resources provided by the enterprise to the
customer, a...

...the customer, and a report viewer for presenting
the reports to the customer, said report **requestor,**
said customer in-box and said reort viewer responsive
to proxy **requests** from said dispatch server to enable
the customer to obtain and view reports from data...

...for
conducting business over the public Internet as
claimed in Claim 16, wherein said report **requestor**
provides a single tool set for **requesting** and
scheduling reports across a plurality of system
resources.

18 The integrated and secure system for
conducting...the customer,
said event monitor application providing said customer
with data necessary to make informed **network
management** decisions with respect to said plurality of
system resources from a single point of customer...

...Internet as
claimed in Claim 22, wherein said event monitor
includes a report manager for **requesting** and
scheduling reports on events occurring within the
customers switched communication connections.

24 The integrated and secure...

...Internet as
claimed in Claim 22, wherein said event monitor
includes a report manager for **requesting** and
scheduling reports on events occurring within the
customers switched data communication connections.

25 The integrated and...

...public Internet as
claimed in Claim 22, wherein said system further
includes a toll free **network manager** as one of said
plurality of system resources, and said manager
provides reports on the...

...public Internet as
   claimed in Claim 22, wherein said system further
   includes an out bound **network manager** as one of said
   plurality of system resources, and said outbound
   network manager providing reports on the customers
   outbound network calls.

   29 The integrated and secure system for...

...28, wherein said system further
   includes a single order entry application and an out
   bound **network manager** as two of said plurality of
   system resources, wherein said order entry application
   enables a...

...to modify said entitlements from a single point of
   customer identification and authentication, said
   outbound **network manager** providing modification of
   individual users entitlements for outbound network
   calls in response to entitlements determined...a single point of customer
   identification and authentication, said order entry
   application responsive to proxy **requests** from said
   dispatch server to enable the customer to **manage** the
   communications **network** services provided by the
   enterprise to the customer.

   33/3,K/22   (Item 22 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT
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00443927
A COMMUNICATION SYSTEM ARCHITECTURE
ARCHITECTURE D'UN SYSTEME DE COMMUNICATION
Patent Applicant/Assignee:
   MCI WORLDCOM INC,
   EASTEP Guido M,
   LITZENBERGER Paul R,
   OREBAUGH Shannon R,
   ELLIOTT Isaac K,
   STELLE Rick,
   SCHRAGE Bruce,
   BAXTER Craig A,
   ATKINSON Wesley,
   KNOSTMAN Chuck,
   CHEN Bing,
   VANDERSLUIS Kristan,
Inventor(s):
   EASTEP Guido M,
   LITZENBERGER Paul R,
   OREBAUGH Shannon R,
   ELLIOTT Isaac K,
   STELLE Rick,
   SCHRAGE Bruce,
   BAXTER Craig A,
   ATKINSON Wesley,
   KNOSTMAN Chuck,

CHEN Bing,
VANDERSLUIS Kristan,
JUN Fang DI,
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  FI GB GE GH GM GW HU ID IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD
  MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG US
  UZ VN YU ZW GH GM KE LS MW SD SZ UG ZW AM AZ BY KG KZ MD RU TJ TM AT BE
  CH DE DK ES FI FR GB GR IE IT LU MC NL PT SE BF BJ CF CG CI CM GA GN ML
  MR NE SN TD TG
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Fulltext Availability:
  Detailed Description
  Claims

Detailed Description
... The packet classifier 2050 hands off priority tagged and non-tagged
  packets to the packet **scheduler** 2060 via the process to process
  interface (90). The process to process interface 2090 need...

...process to process interface 2085, but the same selection of techniques
  is available.

  The packet **scheduler** 2060 used a priority queuing technique such as
  Weighted Fair Queueing to help ensure that...placed on an outbound
  network interface queue ahead of competing best-effort traffic.

  The packet **scheduler** 2060 hands off packets in prioritized order to
  any
  outbound network interface (2010, 20702 2071...
...existing communication network systems has its own way of
  providing service management, resource management, data **management,**
  security, **distributed** processing, **network** control, or
  operations support.

  The architecture of the ISP 2100 defines a single cohesive architectural
  is able to tailor the service offerings to their
  own needs.

  Customer **managed**: customer has direct (**network**-side) access
  for
  the administration and control of their service.

  Loosely Coupled: services obtain and...

...the ISP's role.

  e Revenue Management 2112 - responsible for financial aspects of customer
  services.

* **Network Management** 2114 - responsible for the development
and
operation of the physical **networks** 2102,
9 Product **Management** 2116 - responsible for the creation and
marketing of customer services.

The entities external to the...and
updated through the Marketable Service Gateway 2128. This is actually no
different than the **Management** Service Gateway 2130, except that the
services created and deployed through here are for external...

...services include collection and filtering of alarm information from the
ISP 2100 before forwarding to
network management 2132,
e Service Engines 2134 - A Service Logic Execution Environment for either
marketable or management...

...a service engine 2134, designed specifically to choose a service or
services to execute.

*Resource **Managers** 2 150 - **manages** all resources, including
specialized
resources 2152 and service **instances** running on service engines
2134, and
any other kind of resource in the ISP 2...resources and lower-level
functional capabilities which may be used in Service delivery,
monitoring, or **management**.

Do ISP Integrated **Network** Services
Figure 22 shows how the ISP architecture 2100 supplies services via
different networks. The...

...the same way. Calls (or transactions) will originate in a network from a
customer service **request,** the ISP will receive the transaction and
provide service by first identifying the customer and...

...component of the ISP. Each of these entities is expected to be deployed
in multiple **instances** at multiple sites.

El ISP Components
Ext App 2176- an external application;
App 2178- an...

...execute the desired service
logic; and
Service Select 2194- the function which selects the service
instance
(running on a service engine 2134) which should process transactions
offered from the networks.

PI...by each capability operation is defined by the
capability operation support data parameters and user **instance** data
parameters.

9. Capabilities are deployed into the network independent of any
service.

10. Capabilities...Most Available, First Encountered,

Use Until Failure and Exclusive Use Until Failure.

5. The Resource **Management** Model 2150 should optimize the
allocation of resources and, if possible, honoring a selected policy...

...Management Model 2150 must allow for the
enforcement of resource utilization policies such as resource **time
out**
is and preemptive reallocation by priority.
8. The Resource Management Model 2150 must be able...

...enter a
pool, and de-register to leave a pool.

ii. The only way to **request,** acquire and release a resource 2152 is
through the RM 2150.

12. The relationship between resources should not be fixed, rather
individual **instances** of a given resource should be allocated from a
registered pool in response to need...logic and other meta-data controls
provide a flexible
means to apply policy.

14. Data **Replication** provides reliability through duplication of
data
sources.

15. Database Partitioning provides scalability by decreasing the...OS
standards
will be gained through Mediation Layers.
8 . Operational Functions – Operational personnel handle the
Network
Layer &, Element **Management** for physical &, logical resources.

9 . Administration Functions – Administration personnel handle the
Planning &, Service Management.

10...

...are managed
by administration personnel under the domain of the Data
Management system.

11. Telecommunication **Management Network** (TMN) compliance –
TMN
compliance will be achieved through a gateway to any TMN system.

12...in a sense of an.object-oriented object as
described earlier in the specification. An **instance** of a service
2200
contains other objects, called service features 2202. A service feature
2202...capabilities to be shared. Also,
Management and Marketable Services represent two viewpoints of the same
network: Management Services represent and operational view
of the
network, and Marketable Services represent an external end...

...order the service, a

billing mechanism, some operational support capabilities, and service
monitoring capabilities. The **Management** Services provide processes
and
supporting capabilities for the maintenance of the platform.

b) Service Features...

...has internal, private state data, and a well-defined interface for
creating, deleting, and
using **instances** of the capability. Invoking a capability 2204 is
done by
invoking one of its interface...in User Profiles, which is defined by
customers
or their representatives when the service is **requested** (i.e. at
creation
time).
5. Service 2200 Execution
Services 2200 execute in Service Logic...

...service select function 2148 (Figure 21) uses the Resource Manager 2150
function to find an **instance** of the executing service 2200 to
invoke. The initiating action is delivered to the service 2200
instance, and the service logic (from the service template)
determines subsequent actions by invoking additional service...Purpose
The objectives of this architecture are to.

Create a common ISP functional model for **managing** data;
Separate data from applications;
Establish patterns for the design of data systems;
Provide rules...

...stored at many locations simultaneously, but a particular piece of data
and all of its **replicated** copies are viewed logically as a single
item. A key difference in this embodiment is...is stored at many
locations simultaneously. A particular piece of data and all of its
replicated copies are viewed logically as a single item. Any of
these copies may be partitioned...
...The architecture is that of distributed databases and distributed data
access with the following functionality.

Replication and Synchronization;
Partitioning of Data Files;
Concurrency Controls;
@Transactional Capability; and
* Shared common Schemas.

Claim
...   system of claim 5 wherein the plurality of
functions includes the employment of a packet **scheduler**.

19 The communications system of claim 18 wherein the packet
scheduler
is configured to place packets on a priority queue according to packet
classification and service...

...controller

function can accept or reject control commands based upon the
privileges granted to the **requesting** entity.

27 A computer program embodied on a computer-readable medium for
prioritizing and routing...

...a single connection;
a gateway which couples the packet transmission network with the switched
communications **network**;
a call queue **manager** coupled to the packet transmission network;
an Automated Call Distributor (ACD) coupled to the switched...a single
connection;
a gateway which couples the packet transmission network with the switched
communications **network**;
a call queue **manager** coupled to the packet transmission network;
an Automated Call Distributor (ACD) coupled to the switched...claim 78
wherein the
information includes the time and date that the callback session is
scheduled to occur.
100. The hybrid telecommunication system of claim 78 wherein the
callback session initiates...

...and called number.
is
102. The method of claim 85 further including the step of
scheduling the
callback session at the time and date specified in the information. 103.
The method...

...the calling parties.
104. The computer program of claim 92 further including fourth software
that **schedules** the callback session at the time and date specified
in
the information.
105. The computer...

 33/3,K/23   (Item 23 from file: 349)
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00432616
A COMMUNICATION SYSTEM ARCHITECTURE
SYSTEME, PROCEDE ET PRODUIT MANUFACTURE POUR L'ARCHITECTURE D'UN SYSTEME DE
    COMMUNICATION
Patent Applicant/Assignee:
  MCI COMMUNICATIONS CORPORATION,
  ELLIOTT Isaac K,
  STEELE Rick D,
  GALVIN Thomas J,
  LAFRENIERE Lawrence L,
  KRISHNASWAMY Sridhar,

  RINDE Joseph,
  LITZENBERGER Paul D,
  TURNER Don A,
  WALTERS John J,
  EASTEP Guido M,

MARSHALL David D,
PRICE Ricky A,
SALEH Bilal A,
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  Application: WO 97US21174 19971114   (PCT/WO US9721174)
  Priority Application: US 96751203 19961118; US 96751668 19961118; US
    96752271 19961118; US 96758734 19961118; US 96751209 19961118; US
    96751661 19961118; US 96752236 19961118; US 96752487 19961118; US
    96752269 19961118; US 96751923 19961118; US 96751658 19961118; US
    96752552 19961118; US 96751933 19961118; US 96751663 19961118; US
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  MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG US UZ VN YU
  ZW GH KE LS MW SD SZ UG ZW AM AZ BY KG KZ MD RU TJ TM AT BE CH DE DK ES
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  TG
Publication Language: English
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Fulltext Availability:
  Detailed Description
  Claims

Detailed Description
... to process this call.

  The agents process the calls received by communicating with the NIDS (
  Network Information **Distributed** Services) Server which are
  the Validation or the Database Servers with the requisite databases for
  ...

...service and performs an 800 Number Translation from a reference table in
  the switch or **requests** the Data Access Point (DAP) 3 to provide
  number translation services utilizing a database lookup the database
  servers with a set of database lookup **requests**. The database lookup
  requests include queries on the type of the call, call validation
  based on the telephone numbers...

...the Called Party. The Agent informs the called party about the Calling
  Party and the **request** for a Collect Call. The Agent gathers the
  response from the Called Party and further...

...of intelligent processors with specialized software, special purpose
  bridging switches and ACD's. The Intelligent **Network** is an overlay
  network coexisting with
  :D
  the MCI Switching Network and is comprised of...

...become part of one larger whole with concomitant increases in the level
  of analysis, testing, **scheduling,** and training ...session with the
  PAR using the modem to modem connection over a Public Switched Telephone
  Network (PSTN) connection.

  The computer transfers Point-to-Point (PPP) packets to the PAR using the
  ...The packet classifier 2050 hands off priority tagged and non-tagged

packets to the packet scheduler 2060 via the process to process
interface (90). The process to process interface 2090 need...

...process to process interface 2085, but the same selection of techniques
is available. The packet scheduler 2060 used a priority queuing
technique such as Weighted Fair Queueing to help ensure that...

...placed on an outbound network interface queue ahead of competing
best-effort traffic.

The packet scheduler 2060 hands off packets in prioritized order to
any outbound network interface (2010, 2070, 2071 or 2072) via the
host processor to peripheral bus 2095. Any...existing communication
network systems has its own way of providing service management, resource
management, data management, security, distributed
processing, network control, or operations support. The
architecture of the ISP 2100 defines a single cohesive architectural...
...e Customizable: customer is able to tailor the service offerings to
their own needs.

Customer managed: customer has direct (network-side) access
for the administration and control of their service.

Loosely Coupled: services obtain and...

...io the ISP's role.

   Revenue Management 2112 - responsible for financial aspects of customer
services.

   Network Management 2114 - responsible for the development
and operation of the physical networks 2102.

9 Product Management 2116 - responsible for the creation and
marketing of customer 1 5 services.

The ...9 Global Alliance Partners 2124 - organizations which have shared
facilities and exchange capabilities of their networks and service
infrastructures.
C ISP Functional Framework
Figure 21 shows components of the ISP 2100...

...the platform as well as service logic. Management services are deployed
and managed through the Management Service Gateway 2130. Also,
interfaces with management systems external to ISP 2100 are realized by
...

...services include collection and filtering of alarrn information from the
ISP 2100 before forwarding to network management 2132.

 * Service Engines 2134 - A Service Logic Execution Environment for either
marketable or management services...services to execute.

aResource Managers 2150 - manages all resources, including specialized
resources 2152 and service instances running on service engines
2134, and any other kind of resource in the ISP 21...

...the same way. Calls (or transactions) will originate in a network from a

customer service **request,** the ISP will receive the transaction and
provide service by first identifying the customer and...component of the
ISP. Each of these entities is expected to be deployed in multiple
instances at multiple sites.

58
E. ISP Components
Ext App 2176- an external application;
App 2178...

...2186- the ISP monitoring functions (for fault, performance, and
accounting),
GRM 2188- the global resource **management** view for selected
resources;
LRM 2190- the local resource management view for selected resources;
SR...

...execute the desired service logic; and Service Select 2194- the
ftinction which selects the service **instance** (running on a service
engine 2134) which should process transactions offered from the networks.

1...by each capability operation is defined by the capability operation
support data parameters and user **instance** data parameters.

9. Capabilities are deployed into the network independent of any service.
61
. Capabilities...

...Management Model 2150 must allow for the enforcement of resource
utilization policies such as resource **time out** and preemptive
reallocation by priority.

8. The Resource Management Model 2150 must be able to...to enter a pool,
and deregister to leave a pool.

11. The only way to **request,** acquire and release a resource 2152 is
through the RM 2150.

12. The relationship between resources should not be fixed, rather
individual **instances** of a given resource should be allocated from a
registered pool in response to need...

...logic and other meta-data controls provide a flexible means to apply
policy.

14. Data **Replication** provides reliability through duplication of
data sources.
15. Database Partitioning provides scalability by decreasing the...will
be gained through Mediation Layers.

I 0 8. Operational Functions – Operational personnel handle the
Network Layer & Element **Management** for physical & logical
resources.

9. Administration Functions – Administration personnel handle the
Planning & Service Management.

10...

...by 1 5 administration personnel under the domain of the Data Management system.

11. Telecommunication **Management Network** (TMN) compliance –
TN/IN compliance will be achieved through a gateway to any TNIN system...
in a sense of an object-oriented object as described earlier in the
specification. An **instance** of a service 2200 contains other
objects, called service features 2202. A service feature 2202...

...source of input service data;
the destination for output service data;
error values and error **handling;**
invocation of other services 2200;
9 interaction with other services; and
the interactions with other...

...Management and Marketable Services are part of the same service model.
The similarities between of **Management** and Marketable Services
allow capabilities to be shared. Also, Management and Marketable Services
represent two viewpoints of the same **network: Management**
Services represent and operational view of the network, and Marketable
Services represent an 1 5...has internal, private state data, and a
well-defined interface for creating, deleting, and using **instances**
of the capability.

Invoking a capability 2204 is done by invoking one of its interface...

...in User Profiles, which is defined by customers or their representatives
when the service is **requested** (i.e. at creation time).

5. Service 2200 Execution
1 5 Services 2200 execute in...service select function 2148 (Figure 21)
uses the Resource Manager 2150 function to find an **instance** of the
executing service 2200 to invoke. The initiating action is delivered to
the service 2200 **instance,** and the service logic (from the service
template) determines subsequent actions by invoking additional service...
many locations simultaneously, but a i o particular piece of data and all
of its **replicated** copies are viewed logically as a single item.

A key difference in this embodiment is...

...is stored at many locations simultaneously. A particular piece of data
and all of its **replicated** copies are viewed logically as a single
item. Any of these copies may be partitioned...

...The architecture is that of distributed databases and distributed data
access with the following functionality.

   Replication and Synchronization;
9 Partitioning of Data Files;
   Concurrency Controls;
   Transactional Capability; and
   Shared common Schemas...
...system components and high-level information flows. None of the
components depicted is physical. Multiple **instances** of each occur
in the architecture.

The elements in Figure 28 are.

e NETWK 2224...type of information passing between the logical components.

The flows shown above are.

   Rest - data **requests** to the ISP from external systems;
9 Resp -responses from the ISP to external **requests**;
   Access - data retrieval by applications within the ISP;
   Updates -data updates from applications within ISP...

...behalf of the
78
external systems or network element such as Order Entry or Switch **requested** translations.

Data applications support the following functionality.
   Updates: allow an application to insert, update, or delete data in an ISP **database**.

   Access **requests** allow an application to search for data, list multiple items, select items from a list...

...special forms of updates which are directed to the monitoring function (dbMon) 2240.

   b) Data **Management** 2138
   (1) Client **Databases** (dbClient) 2234
   The dbClients represent satellite copies of data. This is the only way for...2138 domain. Data Management policies include security, distribution, integrity rules, performance requirements, and control of **replications** and partitions.

dbAdmin 2238 includes the physical control of data resources such as establishing data...sizing is left to a detailed engineering design task. It is not common for a **database** copy to be distributed to the Order Entry (OE) sites 2251, however in this architecture...

...for network or system applications such as the ISN operator consoles, ARUs, or NCS switch **requested** translations.

83
The Central sites 2254 provide redundant data storage and data access paths to...Management Architecture should take advantage of commercially available products whenever possible. Vendors offer database technology, **replication** services, Rules systems, Monitoring facilities, Console environments, and many other attractive offerings.

J. ISP Resource...

...in particular.

I 0
C) Objectives
In the existing traditional ISP architecture, services control and **manage** their own physical and logical resources. Migration to an architecture that abstracts resources from services...

...This functionality is represented by the Resource Management 2150 Model.

The objectives of the Resource **Management** Model are designed to
allow for **network**-wide resource **management** and to optimize
resource utilization, to enable resource sharing across the network.

9 Abstract resources...Resource Management Model is a mechanism which
governs and allows a set of functions to **request,** acquire and
release resources to/from a resource pool through well-defined procedures
and policies...

...de-allocation process involves three phases.

Resource Requisition is the phase in which a process **requests** a
resource from the Resource Manager 2150.

Resource Acquisition: If the **requested** resource is available and
the **requesting** process has the privilege to **request** it, the
Resource Manager 2150 will grant the resource and the process can utilize
it...

...to either abandon the resource allocation process and may try again
later, or it may **request** that the Resource Manager 2150 grant it
the resource whenever it becomes available or within...
...register and de-register as legitimate members of resource pools.

Resource Management Model policies enforce **load balancing,**
failover and least cost algorithms and prevent services from monopolizing
resources. The Resource Management Model...LRM domain.

Figure 31 illustrates the domains of the GRM 2188 and LRM 2190 within
network 2270.

4. The Resource Management Model (RMM)
The Resource Management Model is based on the...allocation is achieved
through six steps. Figure 32 depicts these steps.

1 . A process 2271 **requests** the resource 2173 from the resource
manager 2150.

2. The resource manager 2150 allocates the resource 2173.

90
The resource manager 2150 grants the allocated resource 2173 to the
requesting process 2271.
4. The process 2271 interacts with the resource 2273.

5. When the process...

...LRM can not allocate a resource because all local resources are busy or
because the **requested** resource belongs to another locale. In such
cases, the LRM can consult with the GRM to locate the **requested**
resource across the network.

9 1
(4) The Resource Management Information Base (RMIB)
2274

As...

...LRM that will facilitate the resource access. When the process needs a
resource it must **request** it through its assigned LRM. When the LP'M
receives a **request** for a resource, two cases may occur.

1 . Resource is available: In this case, the...LRM 2190 consults with the
GRM 2188 for an external resource pool that contains the **requested**
resource. If no external resource is available, the LRM informs the
requesting process that no resources are available. In this case,
the **requesting** process may.

* give up and try again,
& **request** that the LRM allocate the resource whenever it becomes
available, or
93
request that the LRM allocates the resource if it becomes available
within a specified period of...

...LRM 2190. Then the LRM either.

9 allocates the resource on the behalf of the **requesting** process
and passes a resource handle to it (In this case the resource allocation
through the GRM is transparent to the process), or advises the
requesting process to contact the LRM that manages the located
resource.

d) GRNI, LRNI and RNIIB Interactions
The RMIB 2274 contains all information and status of all **managed**
resources across the **network**. Each LRM 2190 will have a view of the
RMIB 274 that maps to the...
...all LRMs views. The GRM's total view enables it to locate resources
across the **network**.

In order for the RMIB 2274 to keep accurate resource information, each
LRM 2190 must...hardware) and logical resources (software).

b) Scope
The OSM described here provides for the distributed **management** of
ISP physical **network** elements and the services that run on them.
The management framework described herein could also...

...their resulting impact on services.

The management services occur within four layers
e Planning,
   Service **Management,**
   Network Layers, and
   Network Elements.

Information within the layers falls into four functional areas.

* Configuration Management,
   Fault Management,
   Resource...

...and services within the ISP.

This operational support architecture is consistent with the ITU
Telecommunications **Management Network** JMN) standards.

C) Definitions
Managed Object: A resource that is monitored, and controlled by one...

...A collection of one or more management systems, and zero or more managed
systems and **management** sub-domains.

Network Element: The Telecommunications network consist of many
types of analog and digital telecommunications equipment and...in the
Planning layer 2300. Managers within the SM layer may also interact with
other **managers** in the SM layer. In that case there are
manager-agent relationships at the` peer...

...current and future (trending) services.
Accounting 2326: Process and forward Accounting information.

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Network Layer **Management.**

The ISP **Network** Layer **Management** (NLM) Layer 2304 has the
responsibility for the **management** of all the **network**
elements, as presented by the Element Management, both individually and
as a set. It is...on the behalf of the Element Management Layer 2306.

C) Information Model
Figure 35 shows **manager** agent interaction. Telecommunications
network management is a distributed information application
process. It involves the interchange of **management** information
between a **distributed** set of management application processes for
the purpose of monitoring and controlling the network resources...

...purpose of this exchange of information the management processes take on
the role of either **manager** 2350 or agent 2352. The manager 2350
role is to direct management operation **requests** to the agent 2352,
receive the results of an operation, receive event notification, and
process...
...received information. The role of the agent 2352 is to respond to the
manager's **request** by performing the appropriate operation on the
managed objects 2354, and directing any responses or...BER could be used
to develop this common understanding for all PDU exchanged between the
management processes (**manager**/agent).

C) Services of the upper layer
The following identifies the minimum services required of...

...the value of an attribute.

CANCEL-GET:To cancel a previously issued GET.

ACTION: To **request** an object to perform a certain action.

CREATE: To create an object.

DELETE: To remove...

...legacy systems that are not compatible with the supported interfaces.

Equipment that provides a Simple **Network Management** Protocol
(SNMP) interface will be supported with Mediation Devices.
1 5 6,7,8,9...

...two levels from which the ISP 2100 will be managed.

1. For trouble-shooting, the **Network** Layers **Manager** 2372
gives field support a picture of the ISP as a whole. The process of...

...could be isolated to a single Network Element. Individual Network
Elements are accessible from the **Network** Element **Managers**
2374 and would allow a more detailed level ...ISP is missing from
today's ISP, but many recognize its importance.

For configuration the **Network** Layers **Manager** 2370 provides an
ISP-wide view, and interacts with the **Network** Element
Managers 2374 to configure **Network** Elements in a consistent
manner. This will help insure that the ISP configuration is consistent...

...Creation Environment 2376, the Service Manager 2378 is used to place it
in the ISP **network,** and provision the **network** for 1 5 the new
service. Customers for a service are provisioned through the Service...

...services increases the Service Manager 2378 predicts the need to add
resources to the ISP **network.**

This Service **Management,** with appropriate restrictions, can be
extended to customers as another service. While Service Creation is...by
network elements. ISUP RLTAMT, TCPAP domain name lookups and ISDN Q.931
are all **instances** of this. The IN requires, uses and generates this
information. Signaling information coordinates the various...

...set of physical entities collocated in a geographically local area. In
the current ISP architecture, **instances** of sites are Operator
Center, ISNAP Site (which also has ARU's) and an EVS...shared
feature/functionality of services to create a common look and feel of
features.

A. **Network Management**
The architecture is designed such that it can be remotely monitored by an
MCI operations...Welcome server 450 is stateless.

The statelessness means that there is no need to synchronize
multiple Welcome **Servers** 450.